

THE MIRACLE OF HUMAN CREATION

HARUN YAHYA

THE SERIES OF FACTS DEMOLISHING THE LIE OF EVOLUTION -13-

Have you ever looked into the question of how you came into the world?
Of who made your body?
Who built your eyes, hands and organs?
If you examine these questions a little you will encounter a most interesting fact: many years ago, you were a tiny, microscopic living thing, too small to be seen with the naked eye, consisting of a single cell. Neither your size nor the substances which comprised you were very different to those of a bacterium. Yet a miracle happened, and that bacterium-sized cell grew billions of times in size and turned into a baby.
That baby also grew, and became a rational human being.
And that person is now reading the cover of a book about his own creation!
How did that miracle take place?
You will find the answer to that question in this book. You will see what a great miracle the creation of a human being truly is, as well as the proofs of the infinite might of God, Who created man from a drop of water.
You will also witness how the theory of evolution, which claims that man came into existence "by chance," is a superstition that flies in the face of reason and science.
Furthermore, you will understand that God, Who created you, is also powerful enough to raise you up again. As revealed in the verse below:
"Does man reckon he will be left to go on unchecked?
Was he not a drop of ejaculated sperm,
then an alaq (embryo) which He created and shaped,
making from it both sexes, male and female?
Is He Who does this not able to bring the dead to life?"
(Qur'an, 75: 36-40)



ABOUT THE AUTHOR

The author, who writes under the pen-name Harun Yahya, was born in Ankara in 1956. He studied arts at Istanbul's Mimar Sinan University and philosophy at Istanbul University. Since the 1980s, the author has published many books on political, faith-related and scientific issues. His main focus has been the refutation of Darwinism and materialism, two modern myths presented under a scientific guise. Some of the books of the author have been translated into more than 30 languages and published in the countries concerned. Harun Yahya's books appeal to all people, Muslims and non-Muslims alike, regardless of their age, race, and nationality, as they center around one goal: to open the readers' mind by encouraging them to think about some critical issues such as the existence of God and His unity, and to display the decrepit foundations and perverted works of godless systems.

In the name of God, Most Gracious, Most Merciful

To The Reader

The reason why a special chapter is assigned to the collapse of the theory of evolution is that this theory constitutes the basis of all anti-spiritual philosophies. Since Darwinism rejects the fact of creation, and therefore the existence of God, during the last 140 years it has caused many people to abandon their faith or fall into doubt. Therefore, showing that this theory is a deception is a very important duty, which is strongly related to the religion. It is imperative that this important service be rendered to everyone. Some of our readers may find the chance to read only one of our books. Therefore, we think it appropriate to spare a chapter for a summary of this subject.

In all the books by the author, faith-related issues are explained in the light of the Qur'anic verses and people are invited to learn God's words and to live by them. All the subjects that concern God's verses are explained in such a way as to leave no room for doubt or question marks in the reader's mind. The sincere, plain and fluent style employed ensures that everyone of every age and from every social group can easily understand the books. This effective and lucid narrative makes it possible to read them in a single sitting. Even those who rigorously reject spirituality are influenced by the facts recounted in these books and cannot refute the truthfulness of their contents.

This book and all the other works of the author can be read individually or discussed in a group at a time of conversation. Those readers who are willing to profit from the books will find discussion very useful in the sense that they will be able to relate their own reflections and experiences to one another.

In addition, it will be a great service to the religion to contribute to the presentation and reading of these books, which are written solely for the good pleasure of God. All the books of the author are extremely convincing. For this reason, for those who want to communicate the religion to other people, one of the most effective methods is to encourage them to read these books.

It is hoped that the reader will take time to look through the review of other books on the final pages of the book, and appreciate the rich source of material on faith-related issues, which are very useful and a pleasure to read.

In these books, you will not find, as in some other books, the personal views of the author, explanations based on dubious sources, styles that are unobservant of the respect and reverence due to sacred subjects, nor hopeless, doubt-creating, and pessimistic accounts that create deviations in the heart.

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HARUN YAHYA

April 2003

Goodword
BOOKS

About The Author

The author, who writes under the pen-name HARUN YAHYA, was born in Ankara in 1956. Having completed his primary and secondary education in Ankara, he then studied arts at Istanbul's Mimar Sinan University and philosophy at Istanbul University. Since the 1980s, the author has published many books on political, faith-related and scientific issues. Harun Yahya is well-known as an author who has written very important works disclosing the imposture of evolutionists, the invalidity of their claims and the dark liaisons between Darwinism and bloody ideologies such as fascism and communism.

His pen-name is made up of the names "Harun" (Aaron) and "Yahya" (John), in memory of the two esteemed prophets who fought against lack of faith. The Prophet's seal on the cover of the books is symbolic and is linked to the their contents. It represents the Qur'an (the final scripture) and the Prophet Muhammad, the last of the prophets. Under the guidance of the Qur'an and sunnah, the author makes it his purpose to disprove each one of the fundamental tenets of godless ideologies and to have the "last word", so as to completely silence the objections raised against religion. The seal of the final Prophet, who attained ultimate wisdom and moral perfection, is used as a sign of his intention of saying this last word.

All author's works center around one goal: to convey the Qur'an's message to people, encourage them to think about basic faith-related issues (such as the existence of God, His unity and the Hereafter), and to expose the feeble foundations and perverted ideologies of godless systems.

Harun Yahya enjoys a wide readership in many countries, from India to America, England to Indonesia, Poland to Bosnia, and Spain to Brazil. Some of his books are available in English, French, German, Spanish, Italian, Portuguese, Urdu, Arabic, Albanian, Russian, Serbo-Croat (Bosnian), Polish, Malay, Uygur Turkish, and Indonesian, and they are enjoyed by readers worldwide.

Greatly appreciated all around the world, these works have been instrumental in many people recovering their faith in God and in many others gaining a deeper insight into their faith. The wisdom, and the sincere and easy-to-understand style gives these books a distinct touch which directly effects any one who reads or studies them. Immune to objections, these works are characterized by their features of rapid effectiveness, definite results and irrefutability. It is unlikely that those who read these books and give serious thought to them can any longer sincerely advocate the materialistic philosophy, atheism or any other perverted ideology or philosophy. Even if they continue to do so, it will be only a sentimental insistence since these books refuted such ideologies from their very foundations. All contemporary movements of denial are now ideologically defeated, thanks to the collection of books written by Harun Yahya.

There is no doubt that these features result from the wisdom and lucidity of the Qur'an. The author modestly intends to serve as a means in humanity's search for God's right path. No material gain is sought in the publication of these works.

Considering these facts, those who encourage people to read these books, which open the "eyes" of the heart and guide them to become more devoted servants of God, render an invaluable service.

Meanwhile, it would just be a waste of time and energy to propagate other books which create confusion in peoples' minds, lead man into ideological chaos, and which, clearly have no strong and precise effects in removing the doubts in peoples' hearts, as also verified from previous experience. It is apparent that it is impossible for books devised to emphasize the author's literary power rather than the noble goal of saving people from loss of faith, to have such a great effect. Those who doubt this can readily see that the sole aim of Harun Yahya's books is to overcome disbelief and to disseminate the moral values of the Qur'an. The success and impact of this service are manifest in readers' conviction.

One point should be kept in mind: The main reason for the continuing cruelty, conflict, and all the ordeals the majority of people undergo is the ideological prevalence of disbelief. This state can only be ended with the ideological defeat of disbelief and by conveying the wonders of creation and Qur'anic morality so that people can live by it. Considering the state of the world today, which leads people into

the downward spiral of violence, corruption and conflict, it is clear that this service has to be provided more speedily and effectively. Otherwise, it may be too late.

It is no exaggeration to say that the collection of books by Harun Yahya have assumed this leading role. By the will of God, these books will be a means through which people in the 21st century will attain the peace, justice and happiness promised in the Qur'an.

The works of the author include ***The New Masonic Order, Judaism and Freemasonry, Global Freemasonry, Knight Templars, Islam Denounces Terrorism, Terrorism: The Ritual of the Devil, The Disasters Darwinism Brought to Humanity, Communism in Ambush, Fascism: The Bloody Ideology of Darwinism, The 'Secret Hand' in Bosnia, Behind the Scenes of The Holocaust, Behind the Scenes of Terrorism, Israel's Kurdish Card, The Oppression Policy of Communist China and Eastern Turkestan,Palestine, Solution: The Values of the Qur'an, The Winter of Islam and Its Expected Spring, Articles 1-2-3, A Weapon of Satan: Romanticism, Signs from the Chapter of the Cave to the Last Times, Signs of the Last Day, The Last Times and The Beast of the Earth, Truths 1-2, The Western World Turns to God, The Evolution Deceit, Precise Answers to Evolutionists, The Blunders of Evolutionists, Confessions of Evolutionists, The Qur'an Denies Darwinism, Perished Nations, For Men of Understanding, The Prophet Musa, The Prophet Yusuf, The Prophet Muhammad (saas), The Prophet Sulayman, The Golden Age, Allah's Artistry in Colour, Glory is Everywhere, The Importance of the Evidences of Creation, The Truth of the Life of This World, The Nightmare of Disbelief, Knowing the Truth, Eternity Has Already Begun, Timelessness and the Reality of Fate, Matter: Another Name for Illusion, The Little Man in the Tower, Islam and the Philosophy of Karma, The Dark Magic of Darwinism, The Religion of Darwinism, The Collapse of the Theory of Evolution in 20 Questions, Allah is Known Through Reason, The Qur'an Leads the Way to Science, The Real Origin of Life, Consciousness in the Cell, Technology Imitates Nature, A String of Miracles, The Creation of the Universe, Miracles of the Qur'an, The Design in Nature, Self-Sacrifice and Intelligent Behaviour Models in Animals, The End of Darwinism, Deep Thinking, Never Plead Ignorance, The Green Miracle: Photosynthesis, The Miracle in the Cell, The Miracle in the Eye, The Miracle in the Spider, The Miracle in the Gnat, The Miracle in the Ant, The Miracle of the Immune System, The Miracle of Creation in Plants, The Miracle in the Atom, The Miracle in the Honeybee, The Miracle of Seed, The Miracle of Hormone, The Miracle of the Termite, The Miracle of the Human Body, The Miracle of Man's Creation, The Miracle of Protein, The Miracle of Smell and Taste, The Miracle of Microworld, The Secrets of DNA.***

The author's childrens books are: ***Wonders of Allah's Creation, The World of Animals, The Glory in the Heavens, Wonderful Creatures, Let's Learn Our Islam, The World of Our Little Friends: The Ants, Honeybees That Build Perfect Combs, Skillful Dam Builders: Beavers.***

The author's other works on Quranic topics include: ***The Basic Concepts in the Qur'an, The Moral Values of the Qur'an, Quick Grasp of Faith 1-2-3, Ever Thought About the Truth?, Crude Understanding of Disbelief, Devoted to Allah, Abandoning the Society of Ignorance, The Real Home of Believers: Paradise, Knowledge of the Qur'an, Qur'an Index, Emigrating for the Cause of Allah, The Character of the Hypocrite in the Qur'an, The Secrets of the Hypocrite, The Names of Allah, Communicating the Message and Disputing in the Qur'an, Answers from the Qur'an, Death Resurrection Hell, The Struggle of the Messengers, The Avowed Enemy of Man: Satan, The Greatest Slander: Idolatry, The Religion of the Ignorant, The Arrogance of Satan, Prayer in the Qur'an, The Theory of Evolution, The Importance of Conscience in the Qur'an, The Day of Resurrection, Never Forget, Disregarded Judgements of the Qur'an, Human Characters in the Society of Ignorance, The Importance of Patience in the Qur'an, General Information from the Qur'an, The Mature Faith, Before You Regret, Our Messengers Say, The Mercy of Believers, The Fear of Allah, Jesus Will Return, Beauties Presented by the Qur'an for Life, A Bouquet of the Beauties of Allah 1-2-3-4, The Iniquity Called "Mockery," The Mystery of the Test, The True Wisdom According to the Qur'an, The Struggle with the Religion of Irreligion, The School of Yusuf, The Alliance of the Good, Slanders Spread Against Muslims Throughout History, The Importance of Following the Good Word, Why Do You Deceive Yourself?, Islam: The Religion of Ease, Enthusiasm and Excitement in the Qur'an, Seeing Good in Everything, How do the Unwise Interpret the Qur'an?, Some Secrets of the Qur'an, The Courage of Believers, Being Hopeful in the Qur'an, Justice and Tolerance in the Qur'an, Basic Tenets of Islam, Those Who do not Listen to the Qur'an, Taking the Qur'an as a Guide, A Lurking Threat: Heedlessness, Sincerity in the Qur'an.***

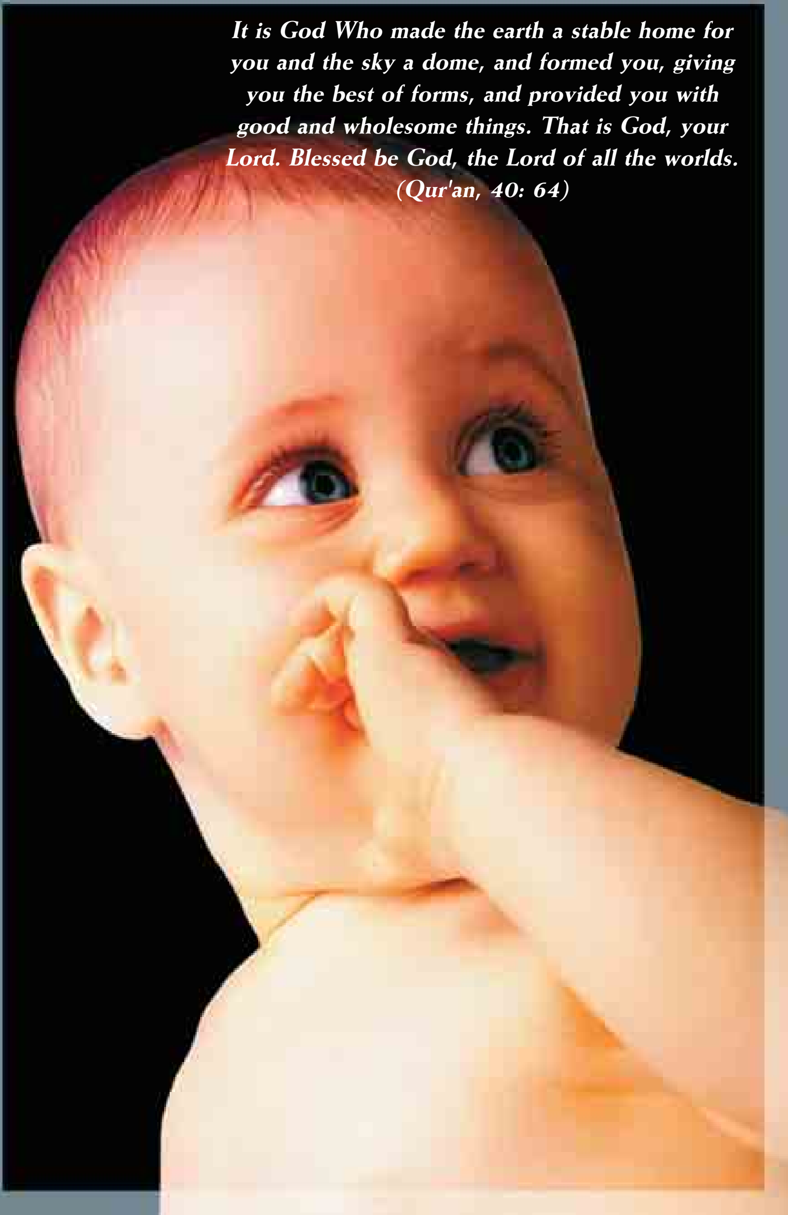
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CONTENTS


It is God Who made the earth a stable home for you and the sky a dome, and formed you, giving you the best of forms, and provided you with good and wholesome things. That is God, your Lord. Blessed be God, the Lord of all the worlds.
(Qur'an, 40: 64)

INTRODUCTION

The human body is the most complicated machine in the world. We see with it, hear with it, breathe with it, walk and run with it, and sense pleasure with it. Its bones, muscles, arteries, veins and internal organs are organized with marvellous design, and when we examine this design in detail we find even more amazing facts. Every part of the body, though each may seem to be so different from another, is made up of the same material: cells.

Cells, each of which is one thousandth of a millimetre, are the structural units that form our body and everything in it. Some of these cells unite to form bones, others to form nerves, the liver, the inner layer of the stomach, the skin or the cornea of the eyeball. Each has the size and shape that exactly meet the requirement of that part of the body.

How and when did cells, which have such varied functions, come into being?

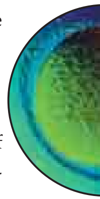
The answer to this question will take us into a process whose every moment is filled with mystery. All the approximately 100 trillion cells that make up your body today came from the division of one single cell. That single cell which had the same structure as all the cells in your body now,

came from the union of your mother's egg cell and your father's sperm cell.

In the Qur'an, God sometimes refers to the wonders of the earth and the sky, and sometimes to the mysteries of the creation of living things as various signs of His existence. One of the most important of these signs is His wondrous creation of human beings.

In many verses, as a lesson to human beings, God advises them to turn and look at their own creation. He explains in detail how human beings come to be and what stages they pass through. In Sura 56, He tells of human creation:

We created you, so why do you not confirm the truth? Have you thought about the sperm that you ejaculate? Is it you who create it or are We the Creator? (Qur'an, 56: 57-59)



The essence of a human being composed of 60-70 kilos of flesh and a mass of bones was originally contained in a drop of fluid. It is certainly a wonder that an intelligent, feeling human being with the faculties of speech and hearing and with a remarkably complex physical structure could come into existence from a drop of fluid. This development was certainly not the result of a random process or the operation of chance, but rather of a conscious process of Creation.

This book will explain in detail a wonder that is experienced continually, by every person on the face of the earth the wonder of human creation. It must be made clear that what is dealt with in this book is only a part of the intricacies of human creation; but even what is related in this book reveals once again the eternal power of the Creator, His limitless knowledge and intelligence that surround and embrace the whole universe. And it will remind human beings that Almighty God is "the Best of Creators".

We created man from the purest kind of clay; then made him a drop in a secure receptacle; then formed the drop into a clot and formed the clot into a lump and formed the lump into bones and clothed the bones in flesh; and then brought him into being as another creature. Blessed be God, the Best of Creators! (Qur'an, 23: 12-14)





It is He Who forms you in the womb however He wills. There is no god but Him, the Almighty, the All-Wise.
(Qur'an, 3: 6)

A MIRACULOUS SYSTEM CREATED FOR A NEW LIFE

The continuation of the human race in the world is possible with the perfect working of the reproductive system. The bodies of men and women are quite different from each other in the functioning of their reproductive systems, but these functionally very different systems perfectly complement each other with the result that a new human being is born into the world. From basic elements produced in two distinct human bodies, independently of each other, one of the greatest wonders of the world occurs: the miracle of human creation...

In order for the miracle of human creation to happen, the necessary preparations actually begin many years earlier. First, male and female reproductive cells must become functional. This comes about in every human being through the process called puberty. The most important element in this process is certainly the hormonal system, which establishes communication among the cells under the direction of the brain.

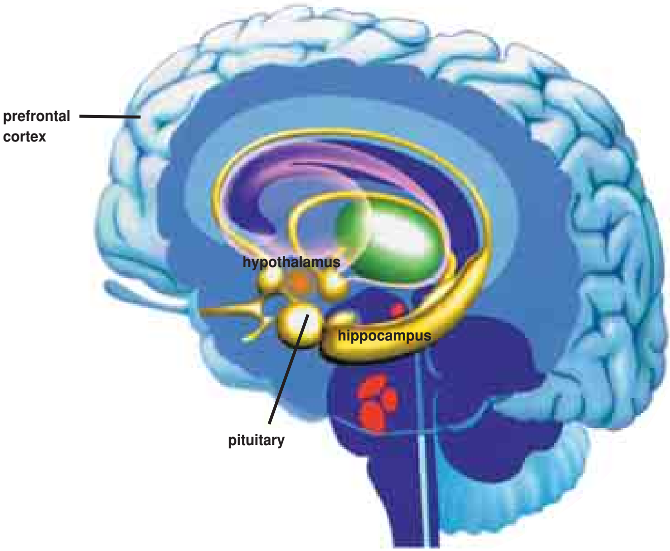
God created a system in which all the needs of the human body and its development would be under the control of the brain. He caused messages coming to the brain from the organs to be evaluated by the brain,

which then gives the appropriate response; this is then delivered to the required area in the shortest possible time. In this process the hormonal system is used to deliver the information. God has created in the human body a perfect postal route for communication. On this postal route, message-carrying molecules are called "hormones" each one of which really performs the function of a postman. Just as a postman follows his route throughout the city, delivering letters to the right addresses, so do hormones carry commands from the brain to the relevant cells. In this way, the functions required for human life are activated within the body.

But here we must be reminded that hormones are not human beings who possess the consciousness to know what messages to carry or to what place to carry them, or to determine the direction of their route. They have not received training, nor have they gained experience after years of studies. The hormones we have called the postmen, are composed of molecules that may be expressed in the most complex formulas. It is certainly a great wonder that a molecule knows where it is going and what it is delivering; that it determines what message it will take to which cell; that it finds its way without ever getting lost in the total darkness of a human body millions of times larger than itself and that it carries out this duty flawlessly, without damage to itself or to its message. This example alone is proof of the extraordinary systems that God has put in place within the human body.

The functioning of a person's hormonal system generally begins when he is still in his mother's womb and continues right up until his death. Reproductive glands start to function as a result of the effect of hormones too. But unlike other parts of the body, the secretion of hormones relevant to the reproductive glands begins in puberty. The hypothalamus, a small area at the base of the brain, is regarded as the controller of the hormonal system; in puberty, it begins to send messages to the pituitary gland to cause the reproductive organs to begin functioning.

Here too it is useful to point out another wonder. The hypothalamus is aware of the developments in the human body; for example, it knows how old a person is and whether or not the person is physically develo-



The master of the hormonal system is the hypothalamus. Its connection with other parts of the brain is illustrated in the picture.

ped enough for his reproductive system to begin functioning. And the hypothalamus performs its work consciously. In other words, the hypothalamus, taking time into account and determining that a person's adulthood has come, gives the appropriate commands to the various endocrine glands in the body. It sends the messages (hormones) at exactly the right moment to the destined reproductive organs and assures the beginning of the development required to allow the human race to continue. And this does not apply to the hypothalamus of just one individual; at this moment the hypothalamuses of millions of people living in the world are performing this function in the same way and at almost the same period.

The fact that this piece of flesh, occupying in our bodies a place no larger than that of a few sugar cubes, is aware of time and can make adjustments for the passage of time is certainly something that demands our thought and attention. How does the hypothalamus make such calculations? Has someone told the hypothalamus what it must do, or has it found out for itself? How does the hypothalamus calculate that the reproductive glands must develop in order for a human being to come into being? How does it know that this particular hormone must be secreted at this particular time? And how does it determine, among all the hormones that it produces, which one will set the reproductive system in operation at exactly the right time? Does it have the foresight to decide on some plan for the future, and make the requisite provisions and preparations to carry out this plan? Why does it wait until the exact time, neither sooner nor later, when the human body is physiologically ready for reproduction?

The intelligence that can make a mass of flesh without eyes, ears or even a brain, direct cells as if it were itself an intelligent being, is incomparable and too much for us to imagine.

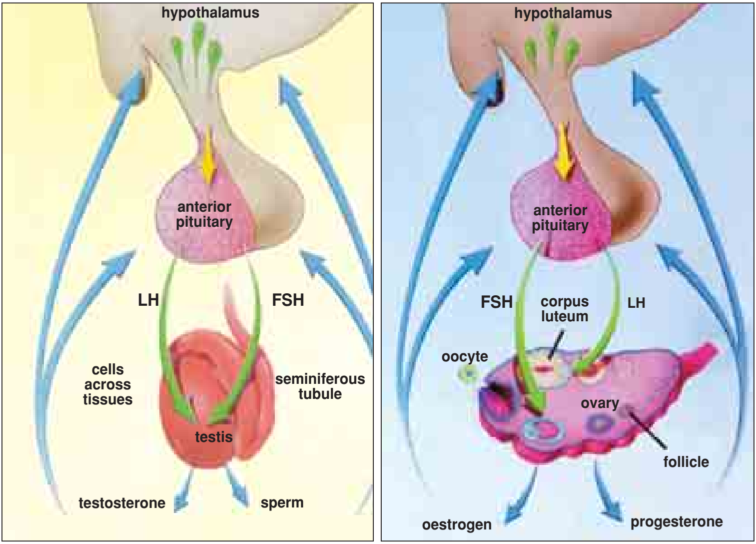
It is neither chance nor any other force that makes the hypothalamus aware of time; the high intelligence that gives it its particular function belongs to God. It is the All-knowing God Who inspires this small piece of flesh to know what it has to do. That everything is in God's control is revealed in the verse:

... God is watchful over all things. (Qur'an, 33: 52)

In the pages that follow, it will be beneficial to keep this fact well in mind.

Hormones Can Differentiate the Sexes

The hypothalamus takes the first necessary steps to bring males and females to the stage of puberty by sending the Gn-RH hormone (Gonadotropin-releasing hormone) via the bloodstream to the pituitary gland. The pituitary gland begins its function on the command of the hypothalamus and starts to send hormones which will activate the reproductive



The hypothalamus causes the production of sperm in men (left) in cooperation with the anterior lobe of the pituitary gland and the testes. The hormone production in women (right) involves the hypothalamus, the pituitary gland and the ovaries. These biochemical operations particular to men and women demonstrate the existence of an intelligent design and plan.

organs. These are the LH (luteinizing) hormone and the FSH (follicle stimulating) hormone. Each of these hormones is secreted in both men and women, but their effect is different.[1]

In spite of the fact that the same hormones are secreted in both men and women, it is most surprising how totally different their effects are. For example, in women, the FSH hormone stimulates the production of the egg; in men, the same hormone stimulates the production of the sperm. In women the LH hormone ensures that the egg is discharged on its way to the uterus and that another hormone called progesterone is secreted by the female reproductive system. Progesterone is used to prepare

the uterus for the baby. The same hormone performs a totally different function in men, stimulating the cells for the secretion of the testosterone hormone. Testosterone produces the male characteristics and assures the production of sperm.

Have they not looked into the dominions of the heavens and the earth and what God has created, and seen that it may well be that their appointed time is near? In what other revelation will they believe, those that deny this? (Qur'an, 7: 185)

It is certainly interesting to consider that same hormones are produced in different bodies according to the same formulas but cause results which are totally different from one another.

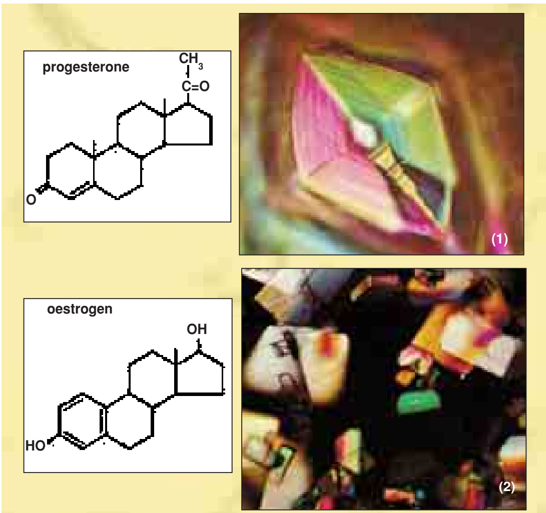
When a hormone is secreted in a male body, it knows that it belongs to a male and makes the appropriate changes. For example, testosterone causes the development of muscles in the male body, it makes the voice deeper and the beard grow.

The same hormone is secreted in the female body according to the same formula but, in women, it causes almost totally opposite results. A hormone that gives a female voice to a woman and a male voice to a man and that can adjust the development of the body according to the sex, is a hormone that can distinguish between the anatomy and chemistry of a male and female body. The fact that a hormone possesses such knowledge means that it has intelligence and must have received instruction.

Many people do not even know about the influence of hormones on the male and female reproductive organs, the inter-relations among the cells or how the bodily functions have been put into operation. They have no idea of the body's chain of command, the sending and delivering of the messages, that the development of the body depends on these commands, and that the slightest hitch in the functioning of the system can have fatal consequences; nor do they have any control over this functi-

oning. It is not at all unusual for a person who has not had special training in this field to be unaware of these things, but the fact that a group of molecules has this knowledge is incredible.

How do the hormones, seen below with their molecular structures, come into being and be in possession of chemical information? How is it that, not content just to know the chemistry of the body, each one, like a chemist, uses the knowledge it possesses, applying it to the areas of the body where it is required? How do they direct other cells to produce the requisite hormones at the time they are required? How can this unconscious mass of molecules have the intelligence to do all these things? It is clear that the molecules called hormones cannot have this intelligence. It is evident that all these processes could not come about by chance by any ot-



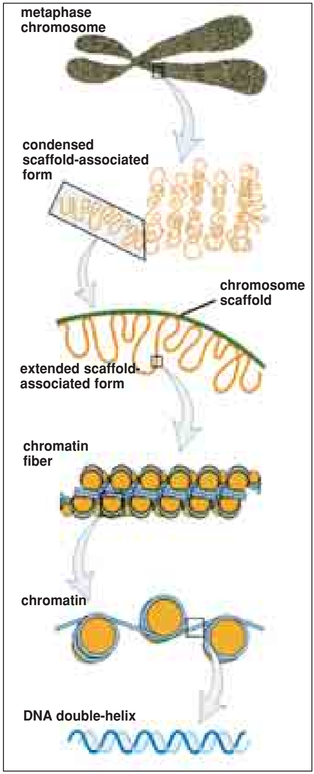
In the above illustration we see the molecular and crystallized structure of the progesterone hormone (1), and below, we see the molecular and crystallized structure of the oestrogen hormone (2). It is evident that these hormones, composed of a few atoms, cannot, by their own will, plan the changes that take place in the human body. It is Almighty God Who created them and gave them their wondrous functions.

her such random operation.

There is only one explanation for this: the biochemical processes by which males and females are given their separate characteristics show the existence of a deliberate plan and design. This design is the work of the supreme intelligence of God. What a human being must do is to think very deeply about this flawless art and to submit to the Lord Who is the supreme ruler of everything.

The Development of Reproductive Cells

In a factory that employs technological devices, many robotic machines are used in the various stages of production. All the programs, functional systems, technical support units for these machines, in short, every kind of information that may be required in the course of production is located at the control centre of that factory. It is like a data bank in which is deposited all the information needed for use in the stages of production, and in quality and damage control. The human body is the most



DNA contains all the information relative to a human being and is found in the nucleus of every one of the approximately 100 trillion cells in our body. Within a cell, DNA is organized into dense protein-DNA complexes called chromosomes. In the illustration on the right, it can be seen how chromosomes are packed in the cell. The design in DNA is one of the best examples of the perfection of God's creation.

advanced and complex structure in the world; if we compare it with such a factory we can say that, in order for this factory to continue operating, it must have all the information stored in the DNA molecule in the nucleus of the cell.

While a human being is still a newly fertilised egg cell in his mother's womb, God determines all the qualities that he will have in the future and imprints them in the DNA molecules. From his hair colour to his height, from the illness he is prone to throughout his life to every imaginable physical characteristic every human quality is preserved carefully, but in a size so small that it can be seen only by an electron microscope.

DNA is found in every one of the approximately 100 trillion cells of our body. The average diameter of a cell is 10 microns (one micron is one thousandth of a millimeter); if we think about this, we can more easily understand how much information is stored in such a small space.

If we think of DNA, which allows the life of living things to continue



Chromosomes

according to a planned program, as an encyclopedia, the volumes of this encyclopedia are its chromosomes.

It is very important that these chromosome volumes occur in pairs in the DNA molecule. In the process of his creation, every human being receives one of these two chromosome volumes from his mother and the other from his father. The 23 chromosomes that come from the mother and the 23 that come from the father are of are complementary to one another. That is, the 46 chromosomes in the nucleus of a human cell are actually 23 pairs of chromosomes. The 23rd chromosome has a special function: it is usually denoted by the letter X or Y. In males, one of the members of the pair is the X chromosome, the other is the Y chromosome; in females, the 23rd chromosome is composed of two X's.

In light of this information a question comes to mind: if every human cell is composed of 46 chromosomes, how is it that as a result of the combination of a mother's and a father's cells, the newly born individual has 46 chromosomes? It would seem logical for the mother's 46 chromosomes and the father's 46 chromosomes to produce an abnormal baby with 92 chromosomes. But this is not the case. How is it then that everyone is born with 46 chromosomes?

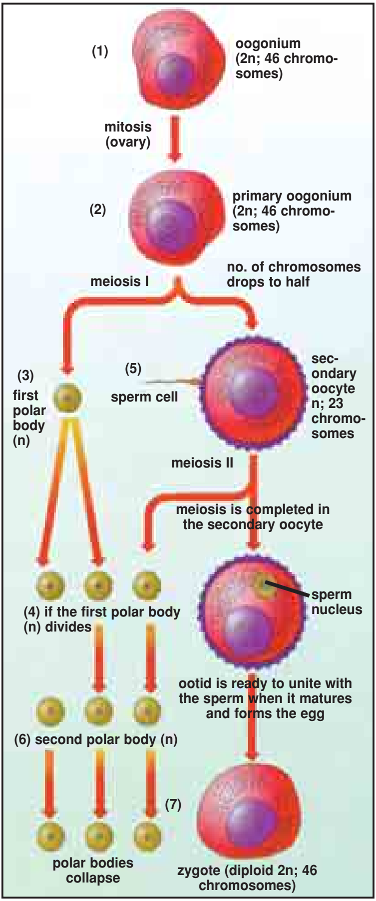
The answer to this question shows the great wonder of creation.

An Unerring Division...

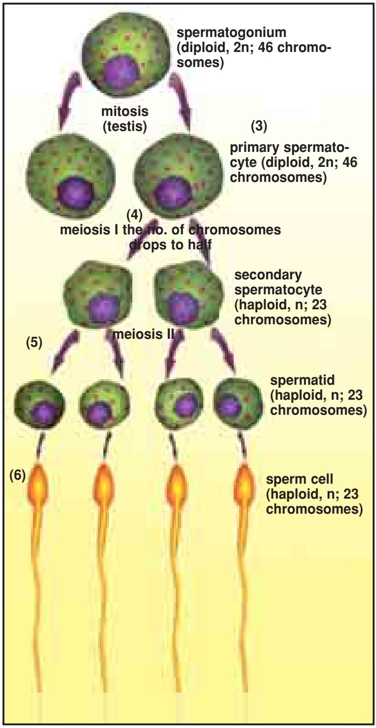
In the cells of the body two kinds of division take place. Of these, the kind of division called "mitosis" occurs in all the body's cells. During mitosis, one cell gives rise to two genetically identical daughter cells. As a result of this division, the mother cell divides to form two daughter cells, each containing the same number and kind of chromosomes as the mother cell.

Here, it is necessary to make one point clear at the outset. If the reproductive cells divided in this way and if they had the same number of chromosomes as the other cells in the body, it would not be possible for a human being to become a human being because, as we explained above,

Stages in the Formation of the Egg and Sperm Cells



As a result of the various divisions of the primary egg cells in the ovaries, three small secondary polar cells and one "ootid" are produced. The small cells die and the larger one forms the egg. If the cells produced were all of the same size, the zygote produced after fertilisation would not receive enough nourishment.



The stages in the formation of the egg, i.e. the female reproductive cell, is illustrated on the left. The egg is formed after the primary egg cells in the ovaries (oogonia) undergo a series of divisions. In the male, sperm is produced when the primary sperm cells in the testes (spermatogonia) divide. From the moment of their first division, the reproductive cells function under supervision. When this harmony among the elements that compose the human body is considered, (cells, enzymes, hormones), every thinking person will understand that this system could not come about by chance. It is God Who creates human beings, and the extraordinary things that happen in our bodies are examples of His creative art.

a birth resulting from the combination of the separate 46 chromosomes of the mother and father would produce a baby with 96 chromosomes causing a complete distortion of the human make-up. But because of the incomparable design of our bodies this does not happen. The kind of division that happens in the formation of the reproductive cells is different; it is called "meiosis". In the course of "meiosis" the number of chromosomes in the cells is reduced by half, that is from 46 to 23.

Before these divisions are complete, the reproductive cells have not come to maturity. In every male and every female body there is a mechanism that brings these cells to maturity and prepares them for the difficult journey ahead of them. The male and female reproductive systems, which are completely unknown to one another and are very different in many ways, try to make the cells they produce ready for one another.

In the following pages a detailed account of this topic will be given. But, as you read these pages, there is an important point that you should notice. From the very first moment that the reproductive cells begin to divide, they are subject to a definite plan. Nothing is random. The cells divide exactly as necessary and maintain the required number of chromosomes without any change or deficiency throughout the process. Every organ, every cell of which it is composed, and the organelles which make up the cells, function in perfect harmony. In addition, the molecules that make up the enzymes and the hormones which play a role in the functioning of the body, and the atoms that make up these molecules, are part of a highly complex information system, which tells them when they will have to start their work, and they are never at a loss to know how and to what degree it is necessary to exert their influence.

Cells, enzymes, hormones in short, the harmony that exists among all the parts of the body is certainly something worth thinking about.

The fact that a molecule and the atoms that make up this molecule can make a plan, and act according to it; that one part can give a command and another part obey it, understand it and put it into effect is too extraordinary a thing to be the product of chance. The fact that this has happened and still happens without exception in the bodies of the milli-

ons of human beings who have ever lived makes it all the more extraordinary that the same harmony operates perfectly in every individual. It is clear that this cannot be by random chance, and that a supreme, conscious intelligence is responsible for giving their special qualities to the microscopic cells that make up our bodies, as well as to the hormones that these cells produce, to the enzymes and the hundreds of thousands of other tiny elements in the human system. It is obvious that every part of every stage of the whole system that functions in the human body is beyond human comprehension and that it is the work of an incomparably powerful intelligence.

This supreme intelligence belongs to God, Who has created the whole universe down to its smallest detail. In the Qur'an, God says that there are no other gods besides Him:

> **God, there is no god but Him, the Living, the Self-Sustaining. He is not subject to drowsiness or sleep. Everything in the heavens and the earth belongs to Him. Who can intercede with Him except by His permission? He knows what is before them and what is behind them but they cannot grasp any of His knowledge save what He wills. His throne encompasses the heavens and the earth and their preservation does not tire Him. He is the Most High, the Magnificent. (Qur'an, 2: 255)**



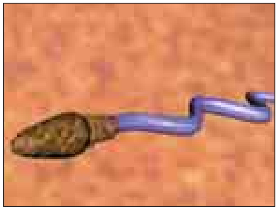
That is God, your Lord. There is no god but Him, the Creator of everything. So worship Him. He is responsible for everything. (Qur'an, 6: 102)

A PERFECT ARMY SET ON ITS GOAL

Think of an immense army composed of millions of soldiers. They are advancing toward a common target, they encounter obstacles on the way and find themselves in mortal danger, but in spite of all these difficulties the army does not give up. The space these soldiers must traverse in order to reach their target is one hundred thousand times larger than they are themselves. Of course, such a crowded army setting out on such a difficult road will need guides and equipment to help them reach their goal.

This huge army with 300 million soldiers is inside the male body. The soldiers are the sperm. Each one is about one hundredth of a millimetre in size. Their target is to reach the egg cell, and to do this, they must travel a very long road.

Of the 300 million sperm cells that set out on the road together, only the strongest one thousand will succeed in reaching the egg. Out of these only one single sperm will win the race and fertilise the egg. Before entering this race, the sperm first set out on a long journey within the male reproductive organs, passing through various stages on their way to maturity. In this maturing process, the sperm have many helpers.

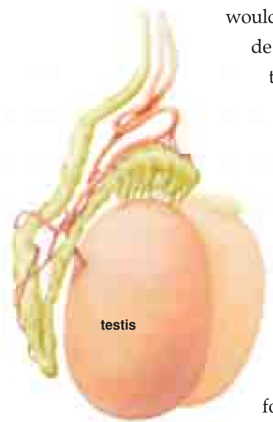


The Sperm's Developmental Pathway

In order to fertilise an egg, about 200-300 million sperm cells are made ready for the journey. This is a surprising number, but there is an important reason for it. As we will see in more detail later, a great number of the sperm that enter the mother-to-be's body die on the way and the number of sperm which are able to reach the egg is very small. Therefore, the great number of sperm obviates the risk of the fertilisation of the egg not being successful. This army of millions of individual sperm is produced in the male reproductive organs called the testes. The sperm go through many stages in their production in the testes and, in order for them to survive, the place where they are produced must be cool. The normal human body temperature is 37°C. This temperature would kill the sperm, therefore sperm cannot live inside the body. One of the most noticeable characteristics of the testes is that they are outside the body. Because of this special design according to which God created the male body, the sperm have a specially prepared place for their production.

The testes are composed of a system of small tubes. This system of tubes occupies quite a large space, which allows millions of sperm to be produced quickly and in a place where they can be easily stored. The reason that sperm must be quickly produced and stored is understandable when we consider that, for an egg to be fertilised, 200-300 million sperm must be produced.

When we think about the number of sperm produced, we can call the testes miniature factori-



The male testes, male reproductive organs, with their location in the body, their reproductive capacity and internal structure, are a wonderful example of design.





On the right, we see the system of small ducts that compose the testes (seminiferous tubules). These small ducts contain the primary sperm cells which will later produce the sperm. In the picture above, we see a detail of the lobule of the testis.

es. For sperm production they have almost 1000 small tubes with a total length of approximately 500 meters. These small tubes are called the "seminiferous tubules". Each one of them is about 50 cm. long and contains the primary sperm cells that eventually produce the sperm.[2]

Seminiferous tubules are lined with sperm-forming cells (spermatogonia) in various stages of development. Later, these cells begin to multiply, first by undergoing mitosis and then twice undergoing meiosis. As we explained in the last section, before fertilisation, the primary sperm cell undergoes division by meiosis and lowers by half the number of its own chromosomes, so that the baby will receive 23 chromosomes from the father.

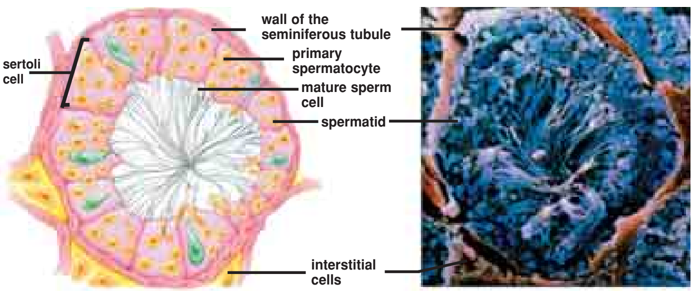
At the end of these divisions, four cells called spermatids are formed which as yet have no ability to fertilise an egg. In order for these spherical cells containing 23 chromosomes, to be able to perform their fertilising function, they must go through further changes.

A group of cells has been put in place to respond to this special need of the male reproductive system and to assist the development of the spermatid cells at precisely the right time. Within two or three weeks after meiosis has occurred, every spermatid cell will be physically transformed by

these "nurse" cells (Sertoli cells) which surround them. Sertoli cells function to support and nourish the immature sperm cells by giving them nutrient material, hormones, and enzymes that are necessary for causing appropriate changes in the spermatids.[3] In the final stage of this process, the qualities proper to a fully developed sperm emerge the tail, the head and the acrosome, that part of the head which is filled with enzymes. (For detailed information see the section entitled "The Sperm Meets the Egg")

All this work of transformation is performed by the Sertoli cells found within the walls of the tubules. These cells have cytoplasmic extensions and are quite large. The Sertoli cells hold the developing spermatid cells firmly in their arms, assuring that they are well injected into their own cytoplasm. In this way, they will provide them with nourishment during their development, and monitor them.[4]

In this process which we have briefly described, a really great miracle occurs. The sperm which assures the continuation of the human race is brought into being, thanks to Sertoli cells, which are made up of proteins and nucleic acids. Let's think for a moment. The fact that a Sertoli cell, rather a cell without intelligence or consciousness and without eyes, ears or a brain, can devote itself to such a duty is truly a wonder. The fact that



Seminiferous tubules, a detailed view of the structure of which is above, ensure sperm production. Right: a cross-sectional view of the seminiferous tubule under an electron microscope. Left: the structure of a seminiferous tubule, showing developing sperm cells in various stages.

such a thing occurs is clear proof that the cell is under the direction of a supreme intelligence. Moreover, that these cells are exactly at the proper place, (that is, in the seminiferous tubules where the sperm develop,) and that they have exactly the requisite qualities (for example, they are larger than the spermatids) is one of the millions of proofs of the perfect design of the human body. God has placed every one of the approximately 100 trillion cells that make up the human body in its proper place; He has given to each one the qualities it needs; and He has given each one the instinct to do its work perfectly. As we are told in the Qur'an:

> **... There is no creature He does not hold by the forelock. My Lord is on a Straight Path. (Qur'an, 11: 56)**

An Interdependent System

In the preceding section we spoke about the role of the Sertoli cells in the transformation of the spermatids into the sperm. What is the physical force that activates these cells and makes them know their duty to nourish the spermatids and monitor their development?

The impetus which makes the Sertoli cells perform their function comes from the follicle-stimulating hormone (FSH), which was mentioned in the earlier section. This hormone is secreted from the anterior pituitary gland and stimulates the Sertoli cells. If this hormone is not produced or fails to reach the relevant area, sperm cannot be produced. When the Sertoli cells receive the stimulation, they begin to secrete a hormone called oestrogen, which is indispensable for sperm production. Another kind of cell that influences sperm production is called the "Leydig" cell; it is found between the seminiferous tubules. These cells produce another hormone required for sperm to develop. The LH (luteinizing hormone) is secreted from the anterior pituitary gland and stimulates the Leydig cells. Then, these cells begin to produce the testosterone hormone. Testosterone is the hormone which assures the growth of the reproductive organs, the development of various glands of these organs and the development of the male sexual characteristics; it is, moreover, the most important hormone in the production of sperm.

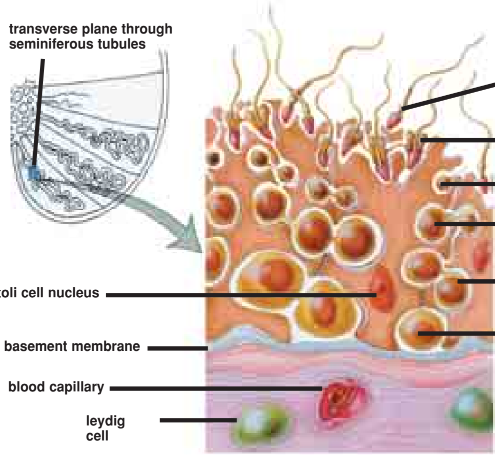
The Sertoli cells have additional functions such as protein production. This protein will carry the oestrogen and testosterone hormones to a fluid found in the seminiferous tubules.[5]

And the Leydig cells also have a second function. In order for the sperm cells to move, they require energy; the Leydig cells supply this energy by the fructose they produce. (This important topic will be dealt with in more detail later.)

As we can see, as in other parts of the body, the hormonal system also performs in a perfectly organized fashion in the reproductive system. Every hormone immediately understands the message carried by another and responds as required. For example, the pituitary gland, when it knows the time is right, goes into action and sends commands to various cells in the testes informing them of the job they must do in the organs and tissues. Moreover, what stimulates the pituitary gland into activity is a different area of the brain called the hypothalamus.

The first stage of the formation of a human being is concerned with the correct understanding of the messages hormones carry and with the proper execution of the commands. How do cells and molecules discern and react to messages carried by hormones? How do they know the chemical make-up of each one and what methods must be employed to affect them?

The fact that, in order to support the production of sperm, the Sertoli and Leydig cells go into action at the command of the pituitary gland (a gland very distant from them, which they have never seen and which has a totally different structure from their own) combined with the fact these cells would not perform any function at all without these commands, makes it impossible to explain their activity in terms of chance. It is impossible that hormones have gained their special characteristics as a result of a series of chance occurrences, because a severance or an interruption during one stage of the system will influence a whole chain of processes. If one element in the system is defective, the functioning of the whole system is impaired. For example, if the Sertoli cell does not know the meaning of the FSH hormone sent by the pituitary gland and does not begin to secrete oestrogen, sperm cannot be produced. Or, if the Leydig cells cannot perform



Development stages of the sperm in the seminiferous tubule are as illustrated above. Seminiferous tubules are lined with sperm-forming cells (spermatogonia) in various stages of development. Through the process of division, these cells form the cells called "spermatid". At the final stage of these processes, the head and the tail sections of the sperm are formed. After all these complex processes, the development of the male reproductive cells, where the information relevant to the human being is stored, is completed.

their function to provide fructose, or if they produce it in insufficient quantities, a sperm, even if it is mature in every way, will die after entering the mother's uterus because it cannot find nourishment; and because it cannot reach the egg, fertilisation will not occur.

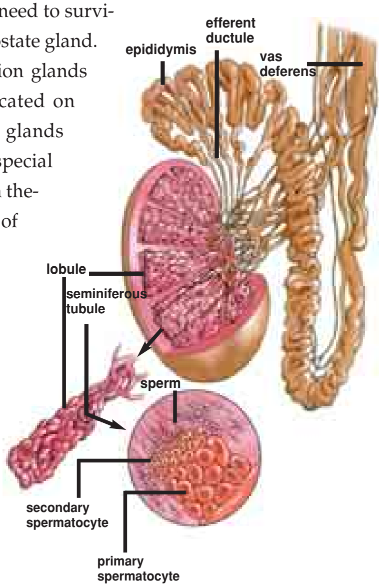
This situation shows us a clear reality. The One Who has established the connections between the organs and the cells is God. He has inspired the pituitary gland, the hypothalamus, the Leydig and Sertoli cells, in short, every element involved in the process, to act in a way that will assure the production of sperm in the male body. He gives them the ability to understand each other's language. Everything happens according to God's command. As we read in the Qur'an:

He governs all, from heaven to earth... (Qur'an, 32: 5)

Other Structures that Help the Sperm Reach its Target

Another element of the reproductive system called the "epididymis" helps the developing sperm cells acquire the ability to move and fertilise the egg. The epididymis is loosely attached to the outside of the testes; it is a coiled tube of about 6 meters. Before beginning this part of their journey, some sperm are stored for a while in the epididymis. The sperm then move toward a connective tube, the "vas deferens", a long tube that ascends from the epididymis in the pelvic cavity. The sperm can be stored in this tube for a long time without losing their ability to fertilise an egg, and when the time comes, the sperm leaves the vas deferens and begins the long journey to the egg cell in the female body.[6]

In order for the sperm to be able to begin the function of fertilisation, they need other helpers to supply what is required on this difficult journey and to give the support they need to survive. One of these helpers is the prostate gland. In addition, there are two secretion glands called the "seminal vesicles" located on each side of the prostate. These glands begin their work of producing special fluids to accompany the sperm on their journey, when the production of the sperm is complete.

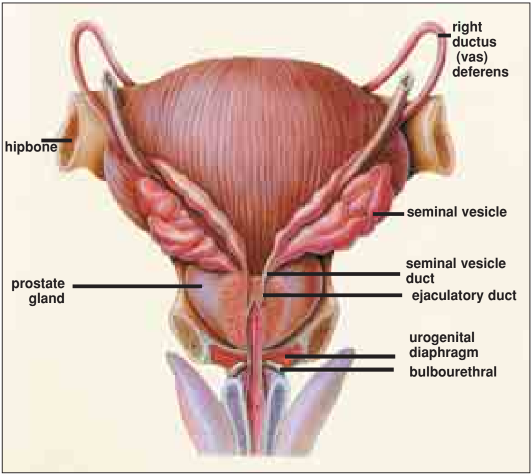


In the production of sperm, several interrelated systems go into operation in the testes. At the side you see a section of the intricate interior structure of a testis. Over and above the complex structure of the human body there is a flawless interrelation between its organs and cells. The functions of the body are carried out thanks to this interrelation. Only one single part of this system made ready for the production of a sperm is enough for us to understand the perfection of the body's structure.

A fluid secreted from the prostate gland joins the sperm on their way. This fluid is composed of citric acid, calcium and acid phosphate, a clotting enzyme and a profibrinolysin. In the female reproductive organs there is a thick mixture of acids which prevents the proliferation of bacteria. Besides curtailing the ability of the sperm to move, this acid mixture can kill them, but the prostate fluid neutralizes the effect of the acid, thus allowing the sperm to swim easily toward the egg.

Here it is useful to pause and think for a moment. The prostate gland in the male reproductive system acts with knowledge of the environment of the female body. It knows that the sperm will encounter an acidic environment in the course of their journey and that they will not be able to survive in that environment. Moreover, it can determine how to overcome this danger and produce the fluid required to do it. There is no doubt that here we have to do with a miracle. It is impossible to say that a secretory gland in the male body knows another structure unconnected with itself, and, acting according to this knowledge, makes decisions and carries them out. Just think: not even a human being with conscious intelligence and the ability to hear and see, calculate, decide on a course of action and arrive at a solution, could foresee what kinds of danger exist in a totally alien environment and take measures in relation to them. But the prostate gland, a piece of flesh composed of cells, can manage this. It is in no way possible to claim that it is the prostate gland that makes such vital decisions and implements them. It is God Who has inspired this gland to perform its function; it is He Who has created every square millimetre of the male reproductive system and of the female body.

Moreover, the prostate gland is not the only gland that produces what is required in the male reproductive system for the journey of the sperm. The fluid secreted by the seminal vesicles located beside the prostate gland is indispensable for this journey. Shortly after the sperm have started on their way, this fluid joins them to help them reach the end of their difficult journey. This fluid contains an abundance of fructose and other nutrient substances as well as large quantities of "prostaglandins" and "fibrinogen". The fructose and other nourishment sustains the sperm



The fluid secreted by the prostate gland (above) is extremely important in the production of sperm. Because of this fluid, the fatal effect on the sperm of the acid mixture in the female reproductive organs is neutralized. The fact that this fluid produced in the male body has a quality to enable it to neutralize the negative effects of a fluid produced in another body is a proof of God's incomparable creation.

from the time it enters the female body to the time it fertilises the egg. In addition, the "prostaglandin" in this fluid helps the sperm to reach the egg in other different ways. One of the functions of prostaglandin is to react with the mucous in the uterus channel and provide a suitable environment for the movement of the sperm. A second function is to cause reverse contractions in the uterus and fallopian tubes to allow the sperm to move more easily.

At this point it is again obvious that we are confronted with a very great wonder. The fluid secreted by the seminal vesicles perfectly knows the intricate structure of the female body which it has never seen. It knows in advance that the reverse contractions in the uterus and fallopian tubes will help the movement of the sperm and, acting with a high

degree of foresight, it adds a chemical material (prostaglandin) to its own make-up that will bring about these contractions. Think of asking any chemist to produce such a reaction; what would he do?

First he would examine the sperm, its structure and the requirements for fertilisation to occur. Later he would try to learn about the female body, its hormones, the egg, the fallopian tubes which carry the egg to the uterus, the uterus, the tissues of the uterus, the nerve system that causes the contractions and many other details. Then, combining his years of education and experience he will discover the material substances which exert an influence on these things; he will take them, and by way of experiment and research he will find out in what proportions these substances must be combined. A human being possessed of consciousness may perhaps be able to do this with a lot of devoted and time-consuming effort.

However, what accomplishes these things is not a chemist who has become an expert in this field after years of study. It is cells, tissues and organs produced by unconscious atoms and molecules. All the same, it is not possible to assert that this collection of cells has a higher intelligence and a greater knowledge than a chemist, or that they perform these functions at the bidding of their own will.

There is no doubt that this fluid produced in the male reproductive system and designed in such a way as to influence the female reproductive system, together with the cells, tissues and organs that produce it are a clear proof of God's creation.

It is evident that this whole interrelated system cannot be the work of chance. A person of intelligence and conscience will immediately grasp that these wondrous occurrences that happen flawlessly in the bodies of every human being that has ever lived are the work of a supreme intelligence and an eternal power, and he will serve God, to Whom alone belongs this eternal intelligence and power.

> **O mankind! Have fear of your Lord Who created you from a single self and created its mate from it and then disseminated many men and women from the two of them. Heed God in Whose name you make demands on one another as well as any ties of kinship. God watches over**

you continually. (Qur'an, 4: 1)

A Fluid with a Complex Structure: Semen

When the sperm begins its journey, the prostate gland secretes a fluid and immediately afterwards another fluid comes from the seminal vesicles; they join the sperm and semen is produced. All together they travel towards the mother's body. As we described earlier in detail, the function of these fluids is to have the nourishment ready to provide the energy that the sperm need, and particularly to neutralize the acids at the entrance to the mother's uterus, making an environment in which the sperm can move more easily.

The whole of this fluid which is ejected from the male body for the process of fertilisation is called semen. 10% of it comes from the sperm canals, 60% from the seminal vesicles, 30% from the prostate gland and the rest is sperm cells and a small quantity of fluids from other secretory glands.[7] That is, what we call semen is a complex combination of fructose, phosphorylcholine, ergothioneine, ascorbic acid, flavins, prostaglandins, citric acid, cholesterol, zinc, acid phosphatase, lactic acid, fibrinolytic and proteolytic enzymes, hyaluronidase and sperm.[8] We have before our eyes a wonder that God has revealed in the Qur'an.

In many places in the Qur'an God calls attention to human creation and commands us to think about this matter. Scientists who have investigated these verses of the Qur'an have discovered that a number of



At the side we see sperm moving in seminal fluid. Seminal fluid is a mixture of fluids secreted by various glands. Contrary to popular opinion, of all the components of this complex fluid, only the sperm has the ability to fertilise. This scientific fact—only recently discovered—was revealed in the Qur'an 1,400 years ago.

wonders of the Qur'an are hidden in those verses that give information about human creation. For example, it has been discovered in research done with the help of modern scientific technology that semen is composed of a mixture of different substances. But this information was made known in the Qur'an 1400 years ago. Semen is described as a "mingled" drop in the Qur'an:

We created man from a mingled drop to test him, and We made him hearing and seeing. (Qur'an, 76: 2)

Of the components which make up this fluid, only one sperm fertilises the egg. A large number of people think that the semen as a whole does the fertilising; however, only a small part of the semen, a sperm, does this. That is, a human being comes into being not from the semen as a whole, but from a small part of it (the sperm).

In the course of sexual union, along with the semen, about 250-300 million sperm are ejaculated from the male. But out of millions of sperm, only about 1000 manage to reach the egg and of these 1000, the egg will only receive one. That is, the essence of a human being is not contained in the semen as a whole, but just in a small part of it. This fact, about which many people either have no knowledge or are misinformed even today, was revealed in the Qur'an 1,400 years ago. The Qur'an explains this reality in these words:

Does man reckon he will be left to go on unchecked? Was he not a drop of ejaculated sperm? (Qur'an, 75: 36-37)

In another verse, it is indicated again that semen is a mixture and humanity is created out of the "extract" of this mixture.

He has created all things in the best possible way. He commenced the creation of man from clay; then produced his seed from an extract of discarded fluid. (Qur'an, 32: 7-8)

If we examine the meaning of the Arabic in this verse, it becomes clear that we are confronted with a wonder of the Qur'an. The English word "extract" translates the Arabic *"sulala"*; and means the essence or the best part of a thing. By either implication, it is "a part of a whole".

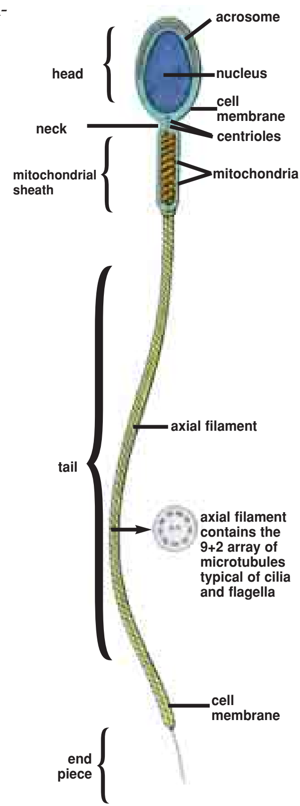
This shows clearly that the Qur'an is the word of a Will that knows

about human creation down to the finest detail. This Will belongs to God, the Creator of human beings.

Final Preparations Under Way...

Now the general appearance of the sperm, supported by the fluids in the semen, has become evident. Every part of the sperm the head, the neck, the midpeace, the tail and the end piece all have their separate functions.

The nucleus (the head section) is no larger than 5 microns. In this 5 micron space has been placed all the information relevant to the human body and required to turn one cell into a human being. In the head of the sperm is a genetic package of 23 chromosomes which will be carried to the egg. That is, in the head of the microscopic sperm cell has been safely packed the information about how all the organs of the human body will work, where they will be located, at which stage which cells will begin to develop and change, in short, all the information about how the human



Every section of the sperm has a different function. If the sperm had no tail, it could not move; if there were no mitochondria in the midpiece, the sperm would produce no energy and would remain immobile; if there were no acrosome in the head section of the sperm, there would be a deficiency in some enzymes, making it impossible for the sperm to pierce and fertilise the egg. This shows that the sperm could not have been produced by chance over a period of time, stage by stage. The perfect design of the sperm comes from God.

body will be constructed.

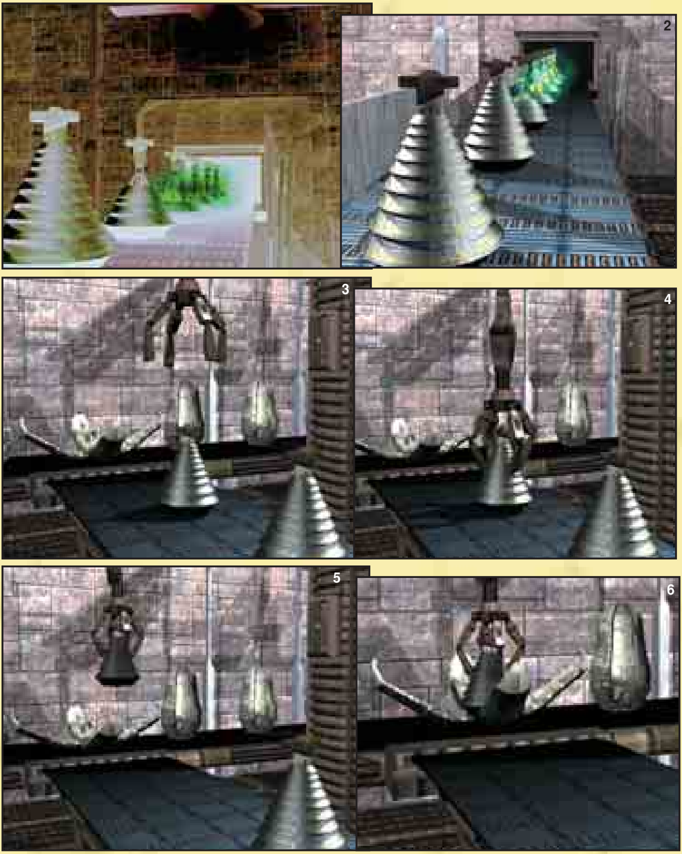
Along with the genetic information, the head of the sperm has another special feature. For example, in the "acrosome", the name given to the outer protective layer of the head, there are substances which will help the sperm in the final stages of its journey. These are enzymes which can dissolve tissues. Using these enzymes, the sperm will be able to pierce the egg and enter it during the process of fertilisation.[9] (see "The Sperm and the Egg Meet")

The second most important part of the sperm is the tail, which allows it to swim easily in a fluid environment. The sperm's tail determines the direction in which it will swim and helps it to reach the egg cell. So far so good. But how does this tail supply the energy needed for the sperm's continual whip-like movements? The energy needs of the sperm are supplied in a wonderful way. The body of the tail is a fuel depot, which supplies energy throughout the journey. On the long road until it reaches the egg, the sperm's need for energy is met by the mitochondria found in this section. Using the energy carriers in the neck of the sperm, the mitochondria supply ATP energy, which allows the sperm to move easily.[10]

As we can see, in all of its aspects the sperm displays a perfect design. Without the tail, the sperm would not be able to move; without the mitochondira in the midpeace, energy could not be produced and again, there could be no movement. If the head section of the sperm were structurally perfect except for a missing acrosome, the required enzymes would not be produced and there would no longer be any purpose in the sperm reaching the egg; it would not be able to penetrate the egg cell and fertilise it.

Therefore, the sperm cannot have acquired all these features by stages in the course of time as the theory of evolution claims. When the first human being appeared in the world, the sperm must have contained all these features. Since it would be impossible for the sperm to perform its fertilising function with a deficiency in any one of these features, and if, as the evolutionists claim, there had been sperm in the past that did not possess all of these features, human beings would not have multiplied; they would have been wiped off the face of the earth. This shows that

The Head of the Sperm is Covered With Protective Armour



In the above illustrations we see the head of the sperm covered with armour. In the head section of the sperm are located the nucleus and various dissolving enzymes. In order to protect this valuable cargo from danger on its long journey, the head section of the sperm is covered with armour (1-2). After being covered, the heads of the sperm are placed in protective casings and sealed. (3-4-5-6). The sperm continue their journey in safety protected in this casing which contains the nucleus, 5 microns in size, and containing all the information relevant to the human body. Also protected in this casing are the dissolving enzymes which will pierce the egg at the beginning of the fertilising process. This is only one of the stages in the production of the sperm. After this, the sperm's motor and tail section are "mounted" separately and a wonderful work of engineering is the result. So, at this point, we must again consider: How do unconscious cells learn how to construct something and put it into production? Given the fact that they have no knowledge of the mother's body, how do they know how to make the sperm ready for it? There is only one answer to these questions: God, Who has created all things, has designed and creates the sperm.

sperm came to be in one moment with their perfect structure; that is, it demonstrates the fact of creation. The Creator of the perfect design of the sperm is God, the Creator of everything.

Systems Created for Each Other

When the sperm leave the male body in the semen, they are not completely ready to fertilise the egg. Until they leave the male body, their movement is controlled by basic secretions in the area where they are stored. For this reason, when the semen is first formed and reaches the female body, the sperm cannot perform their fertilising function. How, then does it come about that the sperm, when separated from the male reproductive system, acquire the ability to fertilise the egg?

In order for the process of fertilisation to be facilitated, a number of systems in the female body must be made ready. At this point, some fluids secreted in the female reproductive system come to the help of the sperm by increasing the sperm's ability to fertilise the egg. These are some of the changes that take place in the sperm after they reach the female body:

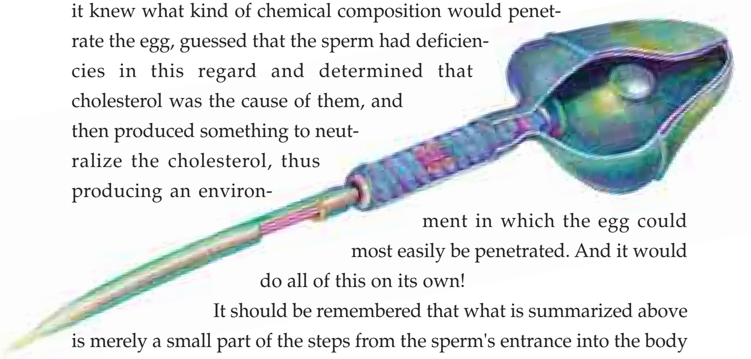
1. The fluids secreted in the woman's uterus and fallopian tubes contain a chemical that destroys those factors that retard the movements of the sperm in the male reproductive tract. In this way, the movement of the sperm that reach the female reproductive tract is increased.

2. The fluids in the male reproductive tract (seminiferous tubules, in the epididymis, and in the vas deferens) all contain a high level of cholesterol. The cholesterol is continually donated to the cellular membrane covering the acrosome, toughening this membrane and preventing release of the enzymes prematurely. But from the point of view of the sperm's ability to fertilise the egg, this particularity is detrimental. For this reason, the sperm which pass into the female body must be rescued from its effects. As in the millions of details in the stages of human reproduction, a special system has also been prepared for this purpose. The sperm, which enter the female body later join the fluid in the uterus. And this fluid reduces the level of cholesterol contained in the semen, which also contains the sperm, thereby making the head of the sperm (acrosome) more fragile. So,

when the sperm reaches the egg, the enzymes inside the acrosome can come out easily and will assure the fertilisation of the egg by their penetration of the egg membrane.

3. The permeability of the membrane in the head of the sperm which enters the female body increases in relation to calcium ions. With the entrance of a great quantity of calcium into the sperm cell, the movement of the sperm increases. The whip-like tail (flagellum) which causes the movement of the sperm changes its former weak undulations and begins to make strong movements, thereby facilitating its ability to reach the egg.[11]

Without doubt, for those who think carefully, there are very important indications to be found in the creation of the sperm in such a way as to be so harmonious and complementary to the female body. The fact that the sperm and the female body cooperate to bring about the same miracle, independently of each other, is indicative of a great conscious intelligence. The sperm, before entering the female body and while they are still in the male body, take measures to produce what is required to correct their deficiencies that might create problems for them in the female body. A special environment is prepared in the female body to increase the movement of a single sperm that is even too small to be seen by the naked eye. It is as if the female body knew that the sperm's journey would be very long and that it would need energy to complete it quickly; it is as if it knew what kind of chemical composition would penetrate the egg, guessed that the sperm had deficiencies in this regard and determined that cholesterol was the cause of them, and then produced something to neutralize the cholesterol, thus producing an environment in which the egg could most easily be penetrated. And it would do all of this on its own!



It should be remembered that what is summarized above is merely a small part of the steps from the sperm's entrance into the body

to the fertilisation of the egg. These steps are completed as a result of thousands of ever more complex chemical reactions in which several proteins, enzymes and fluids are also involved. But it is especially important to remember that it is not our intention here in enumerating these details simply to impart scientific knowledge; our intention is to point out the truth that, contrary to what the evolutionists claim, the formation of a human being is too complex ever to have been the product of blind chance: it is the result rather of the flawless operation of complementary, interdependent and intricate systems. It is not possible for a human being, or even one single enzyme or molecule that activates the sperm, to come into being by chance.

On this point we have talked about how a sperm cell produced in the male body acquires the ability to fertilise an egg with the help of chemical substances in the female body. Now let's pause and think: Could such a complex system come into being in stages by chance as the theory of evolution claims? Certainly, such a thing is impossible, but once more let us consider such a scenario.

A sperm produced by chance in the male body first comes into contact with a female body. Would it, as a matter of chance, find the fluids that allow the sperm to acquire its ability to fertilise, all ready and waiting for it? If not, upon the failure of the first sperm reaching the female reproductive system to perform its fertilisation function, would the female reproductive cells make a decision and begin to produce the required chemical substances?

It is beyond doubt that these two examples do not accord well with logic or intelligence; they are scenarios that could never happen. In the examples we have given on this point, one truth confronts us: all these systems are each a proof of the endless knowledge and power of God Who created everything. God has created in the depths of the human body wonders that are too small for the eye to see and beyond the capacity of the human mind to comprehend. By this, He points out that there are proofs for faith that occur in the body, which are totally independent of human will and knowledge. And He reminds us that His dominion is over everything, including human beings themselves.



We will show them Our Signs on the horizon and within themselves until it is clear to them that it is the truth. Is it not enough for your Lord that He is a witness of everything?
(Qur'an, 41: 53)

THE ROLE OF THE EGG CELL IN THE FORMATION OF A NEW HUMAN BEING

Truly, your Lord is vast in forgiveness. He knew you well when He created you of earth, and when you were embryos in your mothers' wombs. So do not claim purity for yourselves. He knows best those who guard themselves against evil. (Qur'an, 53: 32)

With the onset of puberty, there is a similarity in the developments in the male and female bodies. The female reproductive cell, the egg, along with the female reproductive system is prepared to complement the male reproductive system.

With the coming of puberty in women, just as in men, the hypothalamus knows exactly when the time has come to send commands to the pituitary gland to produce the hormones required to bring the egg cells to maturation. The pituitary gland receives these commands, immediately obeys them and begins to produce the needed hormones.

The production of reproductive cells in women is not continuous as it is in men. This production occurs at particular times. It is the job of the pituitary gland to determine the time. The pituitary gland assures the production of a hormone that will bring the primary egg cells to maturation in the ovary. This hormone knows very well where it will perform its

function, and going straight to the ovary, it announces that the time has come for the maturation of the egg. At this, the egg cells immediately understand the command and begin an intense activity inside the ovary, leading to the maturation of the egg.[12]

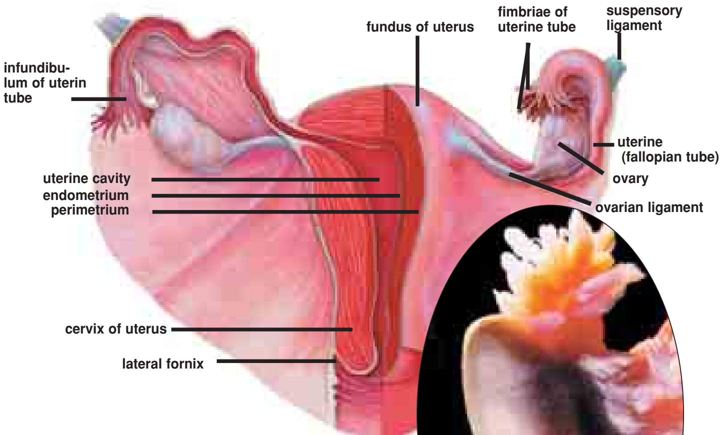
Now, let us examine this information more deeply. How does this tiny secretory gland called the hypothalamus determine the time? And how does it calculate the exact timing of this process, which has occurred in millions of women past and present, without getting confused? The hypothalamus is located at the base of the brain; it is not a timing mechanism, it has no relation with the world outside the brain; it is a piece of flesh composed of cells. The function of this piece of flesh in determining time is an extraordinary thing that cannot be ignored. But this is just a tiny detail of the wondrous occurrences that happen continuously in the human body. This kind of astounding process continues endlessly, at every moment and in every square millimetre of the human body. For example, an amazing miracle happens in the pituitary gland: a command sent by the hypothalamus is read and understood; on the basis of this understanding a decision is made; according to this decision, substances are produced and sent with other productive material without error to a distant and hitherto unseen area. The pituitary gland is also a collection of cells. The coming together of these cells and their conscious understanding of the commands sent to them and their carrying out a command they have understood is an extraordinary thing. What consciousness makes it possible for this collection of cells to "understand", "conceive", "draw conclusions", "arrive at decisions" and "put the decision into effect"?

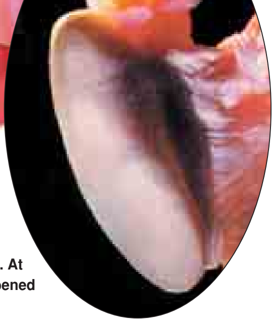
The human body is a dark environment into which light does not penetrate and where many fluids move at great speed through the vessels; it is a dense and complicated place. No evolutionist has ever been able to explain how a mass of molecules in this dense environment can go where it wants in the complex mass by crossing over other materials many times its own size and without suffering harm or loss, or how they can even use some means to send some other substances to the places where they are needed. This is because evolutionists' sole refuge, when they come face to face with these

marvellous proofs of creation, is chance; but there is no room for chance in the complex structure of the human body or of any other living thing.

At this point, we must recall that, in the course of all these events, the intelligence and conscience we encounter do not belong to any cell. What we call a cell has no eyes to see with, to tongue to speak or be understood with, and no ears to hear with. Cells are the creation of God; they are only the means of carrying out His commands; and at every moment, by His inspiration, they effect processes too wondrous ever to have come from themselves.

The Egg Cells Begin to Develop...

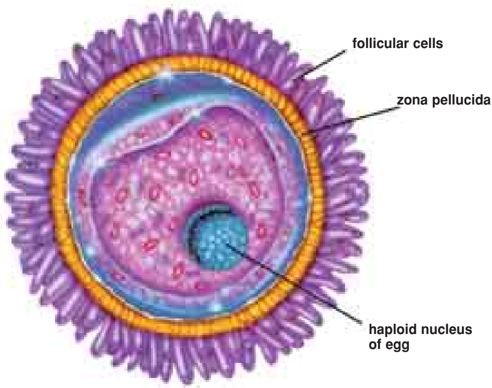




Above we see the internal structure of the uterus. A special system has been created in the female body that takes into account every eventuality that may occur in the production of the egg and in the completion of its journey. For example, the millions of cells in a fallopian tube are responsible for making the egg reach the uterus. At the side we see a picture of a fallopian tube where the ripened egg lands.

The egg is produced in an organ with every aspect having been especially designed for this purpose: the ovary. In every woman, there are two ovaries, one on the right and one on the left. In these ovaries, there is a space, big enough for nerve fibres and blood vessels and lymphatic ducts to enter and exit. Inside this space, there are fibrous tissues rich in blood. For the egg cells to be formed safely, they must be nourished and protected by these tissues. Within this protective structure, there are many sacs (follicles) of varying sizes. In every follicle there is one primary egg cell. But only a single mature ovum is normally released from the ovaries each month so that only a single foetus can begin to grow at a time.

But this production does not consist of only one stage. In order for this egg cell to mature, a few developments must occur, one after the other. In order for the primary egg cell to maturate and become reproductive cells, one division by mitosis and two divisions by meiosis must occur, and in a definite series without confusion. As a result of the divisions, a difference in the number of chromosomes in the cell occurs and different types of cells are formed. As is the case with male reproductive cells, in the female, too, the 46 chromosomes in the primary egg cells are reduced to 23.



At the side we see the representation of a tiny egg cell the size of a grain of salt, which is one of the most important elements that go into the formation of a human being. The system required for the formation of this single cell, is found in every female alive in the world today, as it has been found in all females who have ever lived. This is God's flawless creation.



An egg cell is 150 microns in size, and is colourless and semi-transparent. (above) It is the shape of a sphere and its outer part is surrounded by a soft yet tough membrane. Within the structure of the egg there are extra nutrients like fat, sugar and proteins. This reserve of nutrients will ensure that the egg cell is nourished on its journey and, if fertilisation occurs, will take care of its needs until it reaches the uterus.

As a result of the divisions by mitosis and meiosis in the egg cell, three small cells and one large cell (ootid) are produced. The small cells die from lack of nourishment, while the large cell undergoes some changes and becomes the egg. If each of these cells were the same size, there would not be enough of the required nourishment for the development of the zygote at the end of the fertilisation process. But the fact that one of the cells has more nourishment, and the others are small prevents such a

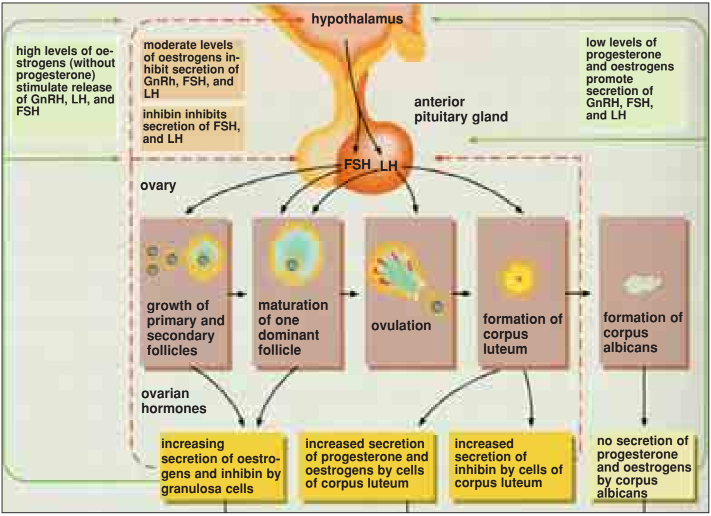
problem from developing.

The development of the egg is not an unchecked phenomenon that occurs randomly by itself. As we explained at the beginning, what gives shape to this development, as in the case of the male reproductive system, are the hormones secreted by the pituitary gland, which is located under the brain. It is possible to outline the stages in the formation of the egg and the hormones involved in the process:

1. Follicular Growth: This is the stage in which the egg cell begins to be formed. The primary egg cell is found, as we said before, in what is called the follicle. The formation of the follicle takes about 14 days. A pituitary hormone, FSH (follicle stimulating hormone), comes to the ovaries in the bloodstream. This hormone is responsible for the formation and development of the follicle in the ovaries and the production of the egg from the primary cell in the follicle. At the same time, this hormone is the cause of the secretion of the oestrogen hormone from the mature follicle.

Oestrogen is a hormone which especially affects the uterus. It accelerates the division by mitosis of the cells in the uterus; this area then swells forming a soft cushion to which the embryo will adhere after the process of fertilisation. In addition, it ensures that a sufficient quantity of blood and tissue fluids are directed to the uterus. These preparations are made every month. If an egg is fertilised, it lodges in this specially prepared tissue where it is nourished and its development continues.

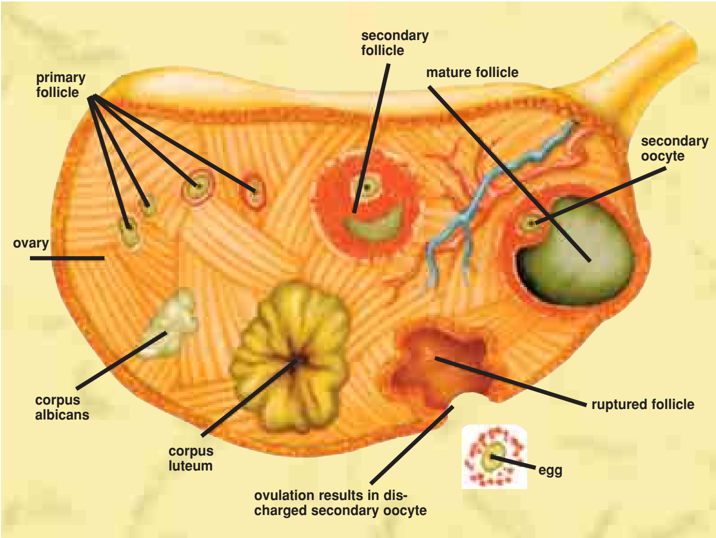
As is the case at every stage of human creation, here also a miraculous event takes place. The cells in the female reproductive system determine in advance the needs of the embryo that they will host, make preparations to meet these needs and work to supply the most suitable environment for the development of the foetus. How can a collection of cells effect operations that require such a degree of consciousness and intelligence? It is, of course, impossible to say that cells possess such a consciousness and intelligence, but cells in the female reproductive system (even cells in the pituitary gland) do these things which we have declared impossible for them, and prepare in advance the environment most suitable to the needs of an embryo they have never known.



A summary of hormonal interactions of the uterine and ovarian cycles. The maturating of an egg is not something that occurs by itself. The development phase of the egg is directed by a hormone secreted from the pituitary gland that lies under the brain. An egg cell is formed carrying all the information relevant to a living organism and prepared for the process of fertilisation by complex and interrelated operations.

It is not possible for anyone with an intelligent mind to claim that cells do these things by their own will and intelligence. Indeed, only one whose thinking is seriously flawed could claim that cells composed of unconscious atoms can do what he himself cannot possibly do with his conscious intelligence. This being the case, the reality before us is crystal clear: all the cells that contribute toward the creation of a human being perform their functions by the inspiration of the Creator; they are vehicles in the realization of a miracle that occurs when every human being comes into the world.

2. Ovulation: At this stage the follicle that carries the egg breaks and the egg is released. But the egg cell, which has been released from the ova-



The egg cells develop in the ovaries, in structures called follicles. In this illustration we see the stages of the development of one single egg cell and its release from the follicle. All women regularly repeat this stage at a particular time. Every month during a particular period, new egg cells are formed and the same hormones are secreted again and again as the female body prepares itself as if fertilisation were about to occur. But in the final period of this preparation, the preparations change according to whether or not sperm are present. This is an evident miracle of creation.

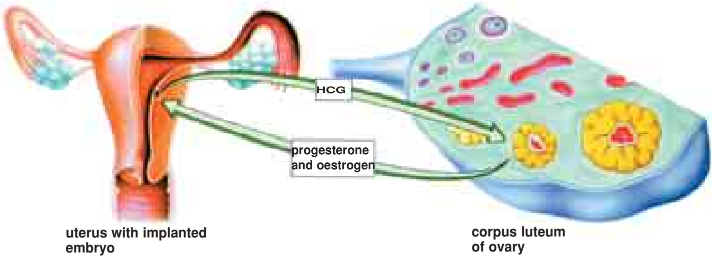
ries into the void needs assistance. Otherwise, the egg cell would never be able to find the place to meet the sperm. So, at this point, the fallopian tubes, located between the ovary and the uterus, go into action. The egg cell, which has been released from the ovaries into the void, is caught by the fallopian tube, which has large tentacles like an octopus. The fallopian tube provides an appropriate environment for fertilisation and the later stages occur depending on whether or not there are sperm present in this tube.

Controlling all this process is the luteinizing hormone (LH) secreted by the pituitary gland. It is worthwhile pointing out another interesting thing about this hormone. The LH hormone is absolutely necessary for

the breaking of the follicle in which is located the mature egg cell and for its movement toward the place where it will meet the sperm. The absence of this hormone will result in the failure of the follicle to progress to the stage of ovulation, even if there is no deficiency in the secretions of the other hormones. But this sort of problem does not occur and 2 days before the ovulation stage, for a reason that scientists are still unable to explain, there is an increase in the secretion of the LH hormone from the anterior pituitary gland. At the same stage there is an increase in the FSH hormone and, by the influence of these two hormones, ovulation occurs regularly every month. In other words, here too the pituitary gland makes an astounding calculation of time and begins the secretion of the required hormones at exactly the right time and in the proper quantities.

Of course this conscious activity is not to be expected from the pituitary gland itself or from the cells which make up this gland. Since there is a superior intelligence and will to be seen here, there is One to Whom this intelligence and will belong: it is the intelligence and will of God which reveals itself in all of these wondrous occurrences in the stages of human creation.

3. The Corpus Luteum (yellow body) – The Luteal Phase: After expulsion of the egg from the follicle, the empty follicle fills with blood. There are special cells called "granulosa" and "theca" cells, which surround the empty space where these follicles are located; they multiply and take the place of the clotted blood in the follicle. These cells accumulate yellow lipid, and are therefore called lutein cells, from the Latin word *luteus*, "saffron-yellow." So, the follicle from which the egg has been released swells with the fluids which have filled it and becomes an active element called the corpus luteum (yellow body).[13] The corpus luteum plays an important role in the preparation of the uterus for the embryo and in conducting the pregnancy in a healthy manner. The most important particularity of this element is the secretion of the hormone called progesterone under the influence of LH (luteinizing hormone). Progesterone has an extremely important function in stimulating the walls of the uterus. The most important change in the uterus occurs in the mucous membra-



When the egg is released from the follicle, the corpus luteum is formed and begins to secrete oestrogen and progesterone. Progesterone stimulates the walls of the uterus. Under the influence of these hormones, changes occur in the wall of the uterus. The purpose of these changes is to prepare a suitable environment where the embryo may lodge after fertilisation. All these operations occur in all women in the same sequence and with the same perfection. These operations are the result of an evident plan and design.

ne (mucous) that lines the uterus. Under the influence of oestrogen and progesterone, the mucous membrane begins to swell. The glands and blood vessels become highly tortuous, and the thickness of the uterine wall increases. The purpose of these changes is to prepare a suitable place for the embryo after fertilisation. In addition, it allows the pregnancy to advance by making the walls of the uterus relax. Progesterone also affects the development of the milk glands.

That one hormone can have an influence on another and that they have the sense to do these things exactly at the right time cannot be explained by the operation of chance. This brings some questions to mind: How can a molecule formed of unconscious atoms be possessed of such a sensitive innate power and take the initiative to organize the operations of the body so comfortably? It is clear that the molecules that make up the hormones do not have intelligence or consciousness. This shows that the system together with its complementary character has been created by a supreme power. It is God, Lord of earth and heaven Who has inspired the molecules which compose the hormones and the atoms which compose the molecules in their conscious activities.

The corpus luteum phase lasts 12-14 days. At the end of this period, if fertilisation has not taken place, the corpus luteum degenerates and the

same stage is repeated. With the degeneration of the corpus luteum, oestrogen, progesterone and other hormones are no longer secreted; that is, the pituitary gland again comes into action. Once again the secretion of FSH and LH begins in the pituitary gland, causing the growth of new follicles to begin. But these follicles cannot develop sufficiently because the lack of oestrogen and progesterone causes a new stage to begin—menstruation.

4. Menstruation: This is the stage in which the unfertilised egg is ejected from the body. Because fertilisation has not taken place, the previously prepared wall of the uterus contracts, the blood vessels are constricted and the egg is ejected. After this stage, the body will begin again to prepare to carry out all these functions.

It was He Who created the heavens and the earth in all truth. The day He says "Be!" it is. His word is the Truth. All sovereignty shall be His on the Day the Trumpet is blown. He is the Knower of the Unseen and the Visible. He is the All-Wise, the All-Aware. (Qur'an, 6: 73)

This whole stage is repeated in all women regularly throughout a particular period of time. Every month new egg cells are produced, the same hormones are secreted again and again at the same period and the woman's body is prepared as if fertilisation were going to occur. But in the final stage, the direction of the preparation changes according to whether or not sperm are present.

Preparations for Fertilisation

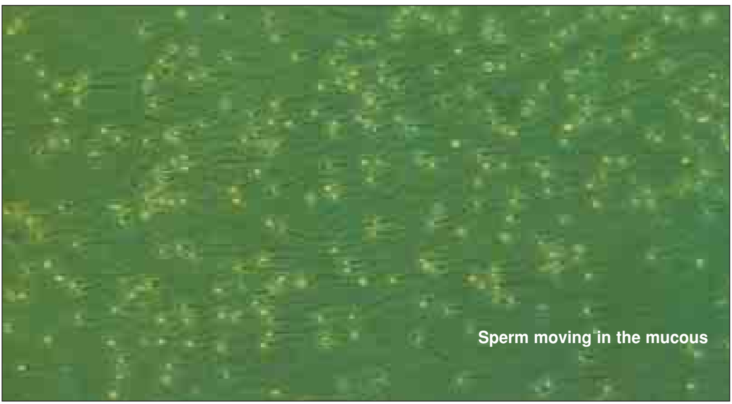
The egg cell is 20-25 cm. from the place where the sperm enters the female body. This distance is about 3000 times the size of the sperm. Considered in proportion to its own size, this distance is quite large and to traverse it the sperm needs strong support.

Before the egg can meet the sperm, some preparations begin in both the male and the female body. The great majority of these preparations are

to protect the sperm on its journey in the mother's body. For example, in the uterus various contractions and undulations occur. This uncommon activity in the uterus and fallopian tubes facilitates the sperm's advance towards the egg. The interesting thing about these contractions is the substance that causes them. This substance is called prostaglandin and is found in the seminal vesicle fluid that comes with the sperm from the male body. Despite the fact that it comes from a different body, this substance knows the structure of the mother's uterus and affects it in such a way as to make the way easier for the sperm.[14]

In order for fertilisation to take place, the changes that take place in the uterus are not limited to these. During this period the tubes expand; under the influence of the oestrogen hormones, the mucous membrane that lines the uterus increases in size and weight. The epithelial cells membranous tissues composed of one or more layers of cells separated by very little intercellular substance proliferate. This structure in the mucous assumes a shape that will permit the sperm to pass through these spaces with the movement of its tail. Besides allowing the sperm to move easily, this transformation has another very important function: the tissues serve as a storage and filter area, allowing only normal sperm to pass. Sometimes the sperm do not have a shape that can ensure fertilisation. In this case, they are suspended in these tissues.

As can be seen from the foregoing, it is evident that every movement in



Sperm moving in the mucous



The sperm have a resilient structure to enable them to endure the long and arduous journey in the mother's body. But as we can see in the picture on the left, some sperm are impaired. By design, impaired sperm are eliminated as they travel in the mother's body, while healthy sperm are detected and guided to the egg. Thus, the egg always unites with a healthy sperm.

the uterus and ovaries is specially designed for the sperm to reach the egg cell. For example, after ovulation has occurred and the possibility for an egg to meet a sperm has been ensured, the mucous begins to perform a reverse operation: it becomes thick and dense, preventing the sperm from entering.

The reason for the changes that happen in the female reproductive system is to allow the sperm which enter the body to reach the egg (ovum). But, as we saw above and in the previous section, this is a matter of great interest: the elements in the female reproductive system assist cells coming from a totally different body.

How can it be that a cell has come to have so much detailed information about other cells with which it has never even shared the same environment? (even if they had shared the same environment the result would not be different.) How does it know, for example, that the movement of these cells must be facilitated? Indeed, it is not possible for the cells that produce the fluid in the uterus to know the qualities possessed by sperm or to prepare a suitable environment for them.

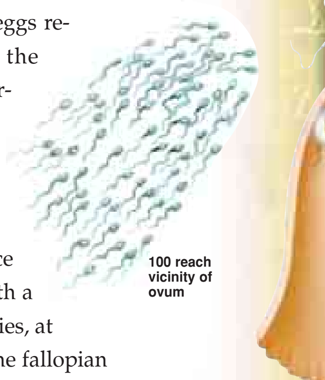
All the functions we have described up to this point occur in all women in the same perfect sequence. When we consider the operation of these harmonious and complementary systems, we come face to face with an evident plan and design: the sperm is designed for the mother's body; the mother's reproductive organs are especially ordered to accommodate the

Conscious Movements of the Fallopian Tube

After maturating and being released, as we explained earlier, the egg is intercepted by the fallopian tube. If the egg cell, when released by the ovary, is not intercepted by the fallopian tube, it passes into other parts of the mother's body where it cannot meet a sperm.

The fallopian tube is where the egg and the sperm meet. In order to ensure the meeting, the fallopian tube performs a twofold activity; first, it takes the maturated egg cell from the ovary and guides it to the place in the tube where it will meet the sperm. Secondly, it takes the sperm from the cavity of the uterus and brings it to the place where it will meet the egg.

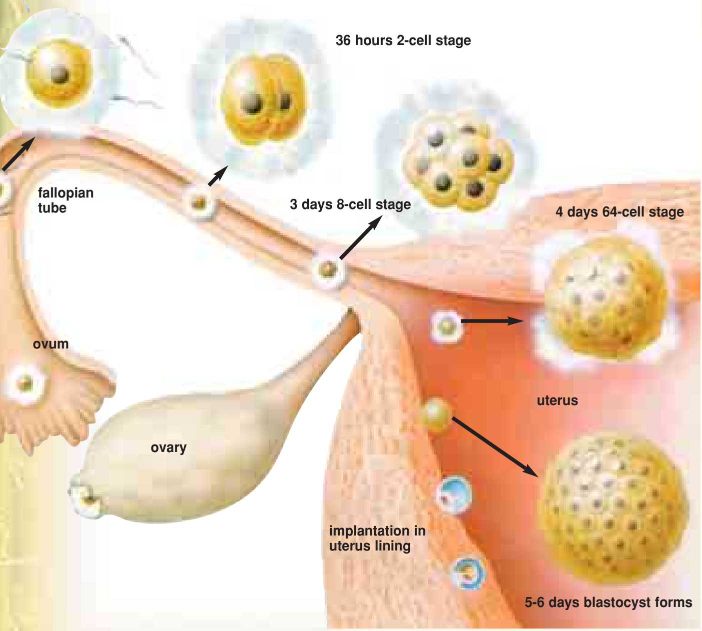
First of all, the fallopian tubes, which are located beside each ovary, collect all the eggs released from the ovary. The ends of the fallopian tubes are like arms which surround the ovary and are designed to collect the maturated eggs. When the eggs have come to maturity, the arms of the fallopian tubes open and, like the arms of an octopus, they grasp the surface of the egg and begin to move over it with a sweeping motion. Aided by these activities, at the time of ovulation the egg falls into the fallopian tube. The egg, released into the pelvic cavity, enters the fallopian tube which is 10-12 cm. in length. The inside of the fallopian tube is covered with millions of tiny hairs which move in one direction, drawing the egg to where it will meet the sperm.[1]



By this time, the follicle cells surrounding the ovum at the time of ovulation still remain as an outer envelope. The folded

mucous membrane of the egg secretes enzymes which gradually cause this cellular envelope to loosen. Thus, the follicle cells are "rinsed away", so that the protective membrane of the egg lies exposed to the sperm.

The timing of these operations performed by the fallopian tube is very important, because both the sperm and the egg cell have a limited life-span. It is necessary that the sperm cells reach the egg cell before this life-span expires. How does the fallopian tube make the adjustments for this? How does it know how long





The moment the mature follicle leaves the ovary



The egg cell is on the move

the alien cells can survive? Certainly a piece of flesh, a few centimetres in size, could not have the information or skill to perform these operations. As is the case with every cell and tissue, the fallopian tube performs its activity only by the inspiration of God, the Creator of all the worlds. For this reason, it carries out this difficult activity easily and without a hitch. So, it becomes possible for the egg cell to be fertilised before it dies, that is, within 24 hours at the most.

1- Lennart Nilsson, *A Child is Born*, Delacorte Press, NY, 1977, p. 22



The fallopian tube is getting prepared to collect the egg



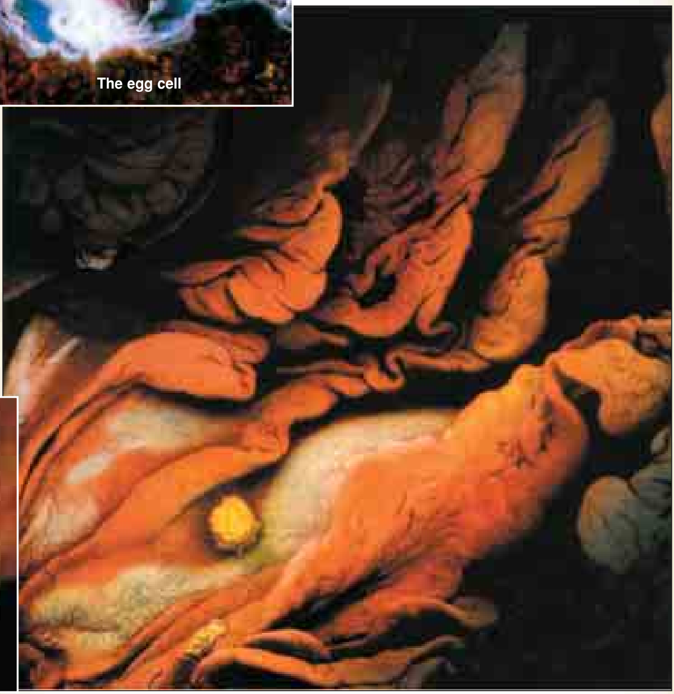
The moment the fallopian tube collects the egg

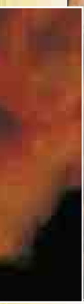
After leaving the ovary, the egg is intercepted by the fallopian tube with remarkable timing. The millions of tiny hairs in the fallopian tube work together in a common effort. The motion of the hairs plays an important role in the meeting of the sperm and the egg.

Here, timing is important, because the reproductive cells have a limited life-span in the body. If they stay there too long, they will die. However, the activities in the fallopian tube are completed within the restricted life-span of the sperm and the egg cell. Here, there is a very important point worth considering: pieces of flesh composed of cells cannot act co-operatively, make timing adjustments, think or act with awareness. All the cells and tissues in the human body act under God's control.



The egg cell





The egg cell in the fallopian tube

sperm. If there is the slightest defect in this harmony, for example, if the sperm does not have the tail that allows it to move, or if it lacked the fluid to balance the acidic environment in the mother's body, reproduction will not occur.

This clearly shows that the great harmony that exists between the male and female reproductive cells is the work of a deliberate and planned creation. It is Almighty God, the Lord of the universe Who has created mankind from a drop of fluid, male and female, in harmony with each other. Human beings should consider the perfection of God's creation and submit themselves unconditionally to Him, bowing before the eternal power of the Lord.

> **And in your creation and all the creatures He has spread about, there are Signs for true believers. (Qur'an, 45: 4)**

The Sperm Meets the Egg

After undergoing many processes on the way to maturation, the egg is released from the fallopian tubes. At this time, it carries with it many cells surrounding it. Before the egg can be fertilised, the sperm which reach the fallopian tubes must pass through these cells, which are called "granulosa" cells, and then penetrate the thick mantle around the egg.

How will the sperm pass through these obstacles?

Here we see once again the evident perfection of intelligent design in the sperm. In that section of the sperm called the "acrosome", about which we spoke earlier, the hyaluronidase and proteolytic enzymes are stored. The hyaluronidase enzyme in the acrosome breaks down a substance (hyaluronic acid) binding the multiple layers of granulosa cells attached to the outside of the ovum. In this way, it opens a way for the sperm to traverse the egg envelope. The proteolytic enzymes ensure the dissolution of the proteins in the tissues attached to the egg. With the help of these two enzymes, the sperm reaches the egg.[15]

How is it that these enzymes which belong to the sperm, produced in the male body far away from the egg, are composed of matter that is

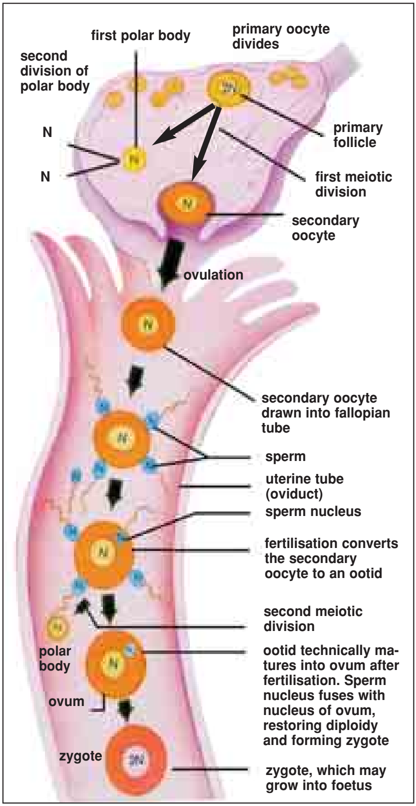
Your god is God alone, there is no god but Him. He encompasses all things in His knowledge.
(Qur'an, 20: 98)



An egg cell surrounded by sperm

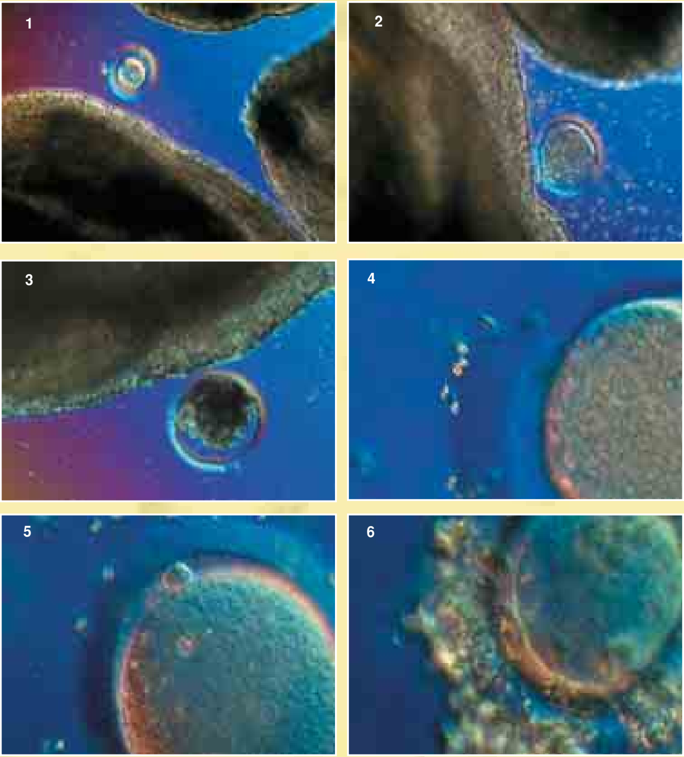
perfectly able to affect the structure of the egg? Who discovered the formula for this operation? Who placed these enzymes exactly in the right place to enable the fertilisation of the egg; that is, in the head of the microscopic sperm?

It is not the sperm itself which does these things. It is not possible for the sperm to be aware of the existence of hyaluronic acid or the effect this acid has on cells, or to know that the hyaluronidase enzyme will neutralize the effect of this acid. Moreover, it is not sufficient to know the formula of this acid; its production in the human body must also be ensured. And it is impossible for the sperm by itself to form the system in the human body which will produce this enzyme. For example, if you ask anyone who has not had training in medicine or chemistry the name of the enzyme that destroys the structure of hyaluronic acid, or if you asked him to write the formula of the structure of this acid, he would certainly not be able to give you an answer. But a sperm cell does things



In the illustration above, we see the stages in the formation of the egg cell and the moment of fertilisation when the sperm and the egg meet.

The Egg's Journey in the Fallopian Tube



Just before the maturated egg is released from the ovary, the fallopian tube goes into action to intercept the egg. With delicate touches on the surface of the ovary, it tries to find the egg cell. (1-2) In order for the maturated egg to be fertilised, it must enter the fallopian tube. Finally, the fallopian tube finds the maturated egg and draws it inside. Now, the egg cell starts its journey. (3) In order for the egg to be fertilised and reach the mother's uterus, it must travel a long road in the fallopian tube. It is the function of the millions cells in the fallopian tube to guide the egg to the uterus. The tiny hairs on the surface of these cells (cilia) move in only one direction. In this way, as if they were actually conveying a precious object from hand to hand, they urge the egg cell to the place where it has to go. Finally, the egg meets the sperm which are seeking it. (4) Only one sperm succeeds in entering the egg. (5) The fertilised egg is directed toward the mother's uterus with the help of the tiny hairs in the fallopian tube (6). Every cell performs its duty flawlessly, because God's creation is perfect.

that a conscious human would not be able to do; with a seeming awareness of chemical formulas which it could not, however, know, it contains substances within its own body to ensure reaching its goal. Certainly, to say that the sperm does this is completely contrary to intelligence and reason. Leaving aside unintelligent and unreasonable suppositions, it will be seen that the presence in sperm of enzymes that will affect the structure of the egg is in itself a proof of creation. This flawless harmony cannot be explained in any way by reference to chance. The fact that the sperm is aware of the chemical structure of another cell different from itself and living in a completely different environment; that it analyses the effects that these chemicals will have; that it then produces the required chemicals according to the results of the analysis, can be explained only with reference to a Creator with superior intelligence, Who has created the sperm with these particular qualities.

The perfect design in the structure of sperm is one of the plainest proofs of the fact that God created human beings, together with everything else.

The Sperm Continues its Journey

When the sperm reaches the outer layer of the egg, its outer membrane binds tightly to the surface receptors on the egg. When this binding occurs, the sperm sheds its outer covering (acrosome). At the same time, the membrane of the egg secretes a substance called "fertilizin," which is required to attract the sperm. This molecule makes the sperm able to move more quickly, allowing them to react with the egg membrane more easily. In addition, fertilizin facilitates the reaction of the acrosome found in the head of the sperm.

When the sperm touches the egg membrane, new substances come into play and new reactions take place. When the sperm touches the egg, it secretes a substance called "anti-fertilizin" which neutralizes the effect of the fertilizin secreted by the egg. In this way, the first sperm to reach the egg will stop other sperm from approaching the egg.[16]

The membrane which surrounds the egg cell begins to renew itself



In the large picture we see an egg cell surrounded by sperm; in the small pictures, a number of sperm cells. The sperm have special characteristics that allow them to interact with the structure of the egg. Just one of these characteristics, for example, the existence of enzymes which allow the sperm to pierce the whole defensive system of the egg and enter it, is by itself a proof of creation. God created the sperm with all their special characteristics in an instant.

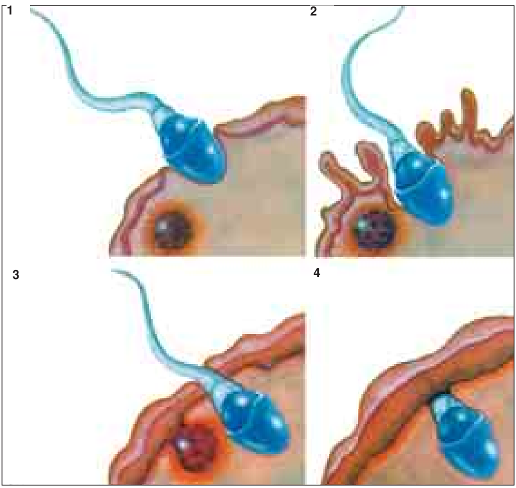
about two seconds after the sperm cell enters and never allows another sperm cell to enter. Experiments have been done in which a few sperm have been observed entering the egg when the membrane has been destroyed. For this reason it is necessary that the fertilisation membrane be formed as quickly as possible. After the formation of the fertilisation membrane, no sperm can enter the egg. In this condition, it is possible to compare the egg cell to a building protected by security. The outer membrane of the egg cell really acts like the security control system of a building which contains very important information; access is denied to the inside of the cell.

Once a sperm enters the ovum, its head swells and it wanders very slowly toward the centre of the egg. Later, within 30 minutes, the egg completely unites with the sperm inside it. As a result of all these processes, the genetic information contained in the sperm is transferred to the egg.[17]

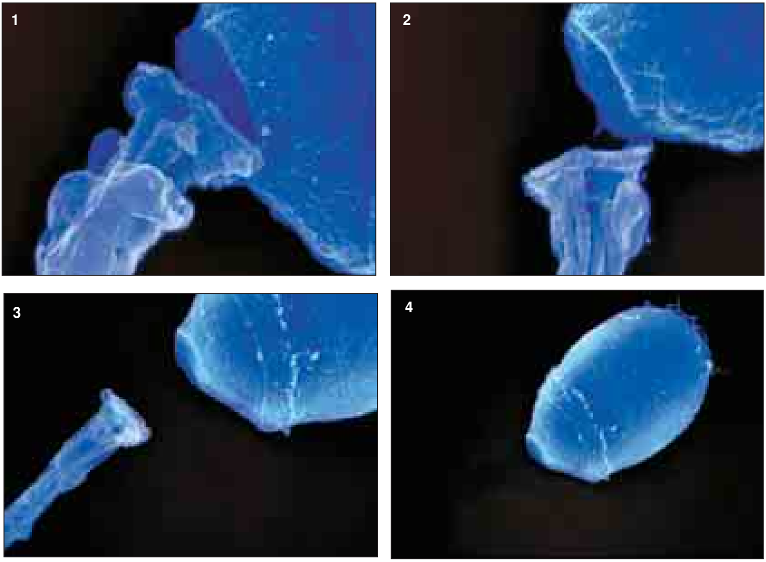
But here there is an important point: if the receptors on the sperm and the egg accept one another, they bind to each other; if not, binding is

not possible. The reason for this is as follows: the egg of every living being secretes a substance called fertilizin, which has a particular chemical composition. This is a precaution which prevents sperm cells of other species (non-human species) from approaching the egg and causing the degeneration of the human species. Thus, a cat cannot mate with a horse and a human being cannot mate with any other living thing.[18]

The electrical charge carried by the sperm and the egg also has an effect on fertilisation. The egg always carries a negative charge and the sperm carries a positive one. Because opposite charges attract each other, the egg draws all the sperm towards itself. But with the first sperm that is able to enter the egg, the charge changes immediately. Now the egg assumes a positive charge like the sperm's. Because like charges repel each other, at the moment of union the egg begins to repel all other sperm.[19]



When the sperm reach the egg, only one of them succeeds in penetrating its protective membrane. (1) When the sperm enters the egg, certain changes occur and the egg closes itself to other sperm. (2-3) Once it enters the egg, the sperm's tail breaks off and remains outside. (4) Fertilisation occurs.



The moment the sperm enters the egg, it sheds its tail. In the pictures above, we see, stage by stage, the breaking off of the tail of a sperm that has managed to enter an egg. This occurs because the continual movement of the tail inside the egg would soon damage it. This breaking off of a sperm's tail can be compared to the jettisoning of fuel tanks and engines no longer needed by missiles and shuttles as they leave the earth's atmosphere on their way into space. The fact that the sperm takes account of something like this and detaches its tail in time, so as not to damage the egg, is a sign of a highly conscious activity. The One Who makes this sperm act in this conscious manner is God, the Creator of the sperm and the egg.

The Last Stage of Fertilisation

When the sperm enters the egg, it sheds its tail and leaves it outside. We may compare this to a space shuttle which detaches its fuel tank when returning to earth. As we know, when the fuel tanks which carry the shuttle outside the earth's atmosphere have fulfilled their purpose, they are released into space; when the fuel inside them is used up, the tanks are

an unnecessary weight. To facilitate leaving the earth's atmosphere, it is necessary that these tanks be released at exactly the right time. In the same way, the tail of the sperm, which provides the required energy and movement capability, is left behind as the sperm attempts to enter the egg.

It is obvious to the attentive reader that fertilisation is a highly calculated and systematic process. Very slowly the fluids which surround the egg dissolve the sperm's armour as it reaches the outer membrane surrounding the egg. The enzymes that are released at the moment the sperm's armour is perforated allow the sperm to pierce the egg's outer membrane and enter. The change in the electric charge at this moment repels other sperm and protects the newly developing organism from uninvited guests.

If such a highly protective and cooperative system had not been created, the union of the sperm and the egg would never have been achieved.

If the egg cell had not secreted the guiding fluid, it would not have been possible for the sperm to reach the egg, which is so distant from it relative to its own size.

If the sperm had not had its armour, they, like other microorganisms, would have been dissolved in the fluid surrounding the egg.

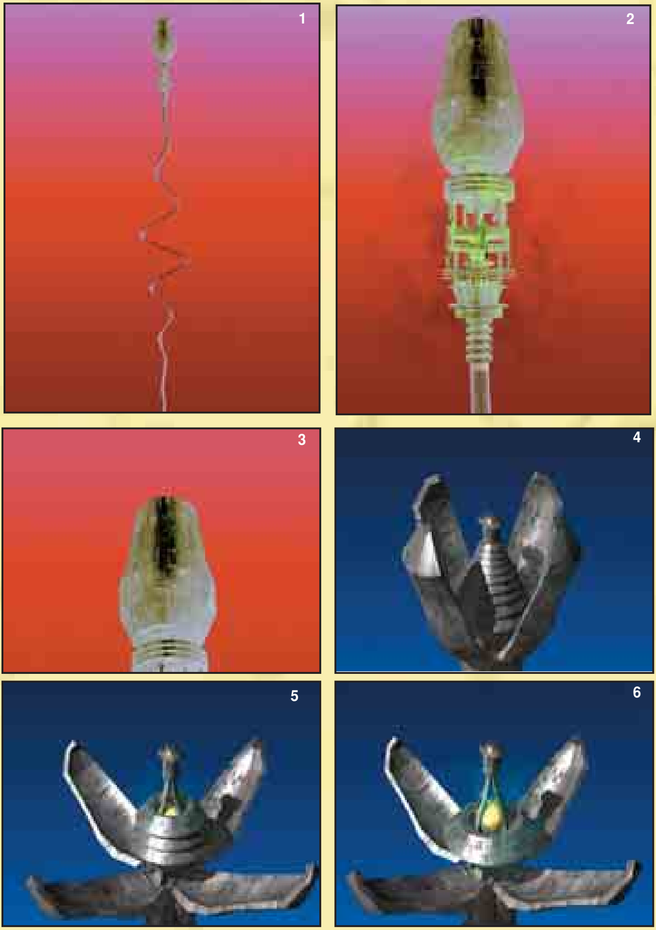
If special dissolving enzymes had not been placed beneath this armour, the sperm would never have been able to enter the egg, even after having gone so far as to reach it.

If the electric charges of the sperm and the egg had been the same and not opposite, the egg would have repelled the sperm and no sperm would have entered the egg.

As we can see, in the union of a single sperm with an egg, there is an extraordinary balance and calculation. Furthermore, this balance and calculation have occurred not just once; they have been repeated time and again since the beginning of the human race for every one of the millions of individuals spread throughout the world.

Even in one single stage there is no room for chance in this miraculous process, which shows very plainly that God created human beings.

The Protective Armour of the Sperm



The head section of the sperm has a protective armour. (1-2) Under this armour there is a second armour, and under it is the cargo that the sperm carries. (3-4) This armour will protect the valuable cargo inside it, that is, genetic information, from the harmful materials around it. This protective armour is very strong, yet is designed to open easily at the appropriate moment. (5). For example, during fertilisation this protective armour in the head of the sperm opens and releases the dissolving enzymes inside it. (6) The fact that this wonderful design has been placed in a microscopic cell is an example of God's flawless creation.

The Determination of the Baby's Sex



Until recently, people believed that a baby's sex was determined by the mother's cells, or, at least, that the sex was determined by cells from both the mother and the father. But in the Qur'an there is a different account of this matter; it says that maleness and femaleness are created from sperm entering the womb:

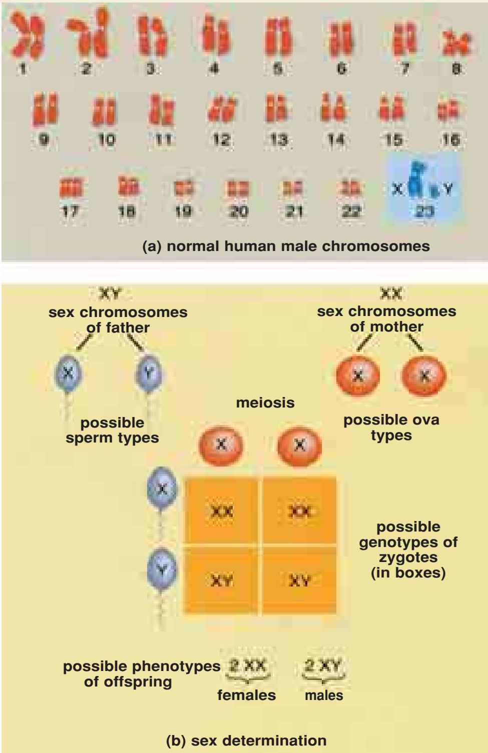
He (God) has created both sexes, male and female, from a drop of semen which has been ejected. (Qur'an, 53: 45-46)

The truth of this revelation of the Qur'an has been confirmed scientifically by developments in genetics and microbiology. It is now understood that sex is determined by the male sperm and that the female egg plays no role in this determination. What determines sex is chromosomes. Of the 46 chromosomes that determine the human structure, two are called sex chromosomes. These two chromosomes are labelled XY in males and XX in females, because the respective chromosomes resemble these letters. The Y chromosome carries male genes and the X chromosome carries female genes. The formation of a human being begins with the union of one of each of these chromosomes which are present in pairs in the male and female. During ovulation in the female, the sex cell divides into two, each carrying the X chromosome. In males, the sex cell divides into two sperm, one carrying the X chromosome and the other carrying the Y chromosome. If the X chromosome in the female unites with a sperm carrying the X chromosome, the baby will be a girl; if it unites with a sperm containing the Y chromosome, the baby will be a boy.

That is, the sex of the baby depends on which chromosome in the male unites with the female egg.

Certainly, until the science of genetics appeared, that is, until the twentieth century, these facts were unknown. In many cultures it was generally believed that a baby's sex was determined by the female. Precisely for this reason, a woman who gave birth to a girl was condemned. However, in the Qur'an, 13 centuries before the discovery of genes, this superstition was rejected by the revelation that the origins of sex do not come from the female, but from the semen of the male.

The Qur'an is the word of God, the Lord of all the worlds. Such scientific miracles are



The sex of a baby depends on which male chromosome unites with the female egg. Of the 23 pairs of chromosomes (that is, 46 individual chromosomes), 2 are called sex chromosomes. These two chromosomes are designated as XY in the male and XX in the female. The Y chromosome carries male genes, the X chromosome, female genes. The formation of a human body begins with the union of one of each of these chromosomes, which are present in pairs in males and females (left). If the X chromosome in the female unites with the sperm containing the X chromosome in the male, the baby will be a girl; if it unites with the sperm containing the Y chromosome in the male, the baby will be a boy. (Gerard J. Tortora, *Introduction to the Human Body: Essentials of Anatomy & Physiology*, pp. 569-570)

among the evidence of this fact.

It is a Book We have sent down to you, full of blessing, so let people of intelligence ponder its Signs and take heed. (Qur'an, 38: 29)



***They do not render to God the homage due to Him. Yet God is Powerful and Almighty.* (Qur'an, 22: 74)**

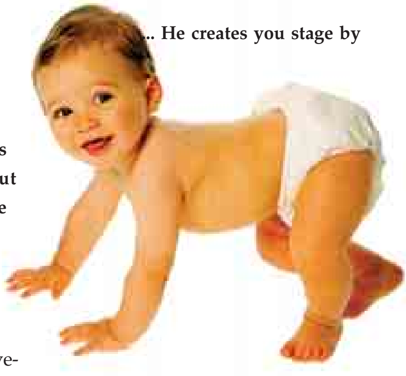
THE CREATION OF A HUMAN BEING FROM A CELL

Everyone in the heavens and earth belongs to Him. All are submissive to Him. It is He Who originated creation and then regenerates it. That is very easy for Him. His is the most exalted designation in the heavens and the earth. He is the Almighty, the All-Wise. (Qur'an, 30: 26-27)

The Transformation Begins: The Three Stages of the Baby in the Womb

As is obvious from what has been said so far, in the period of time between the formation of the sperm and the egg and their meeting, every event that occurs is a miracle. The changes that occur after these two cells unite, and the all-encompassing preparations made in the woman's body will show us other wondrous occurrences.

Even within hours of the time when it is fertilised by the sperm, the egg divides and grows very quickly. Today we know that the baby undergoes three stages of embryonic development while it is in the mother's womb. But this information, which it has taken long years of research to attain with the help of modern technology, was made known in the Qur'an 1400 years ago. These scientific facts are revealed in this verse:



... He creates you stage by stage in your mothers' wombs in a threefold darkness. That is God, your Lord. Sovereignty is His. There is no god but Him. So what has made you turn away from Him? (Qur'an, 39: 6)

It will be noticed that this verse shows that three distinct stages occur in the development of a human being while it is in the mother's womb. Indeed, modern biology has established that the baby in the mother's womb does go through three different stages of development, just as is stated in this verse. This is a matter of basic information in all the books on embryology required to be read as textbooks today in medical faculties. For example, *Basic Human Embryology,* a standard basic work of reference on embryology, makes the following statement:

> The life in the uterus has three stages: (i) pre-embryonic: first two and a half weeks; (ii) embryonic: until the end of the eighth week, and (iii) fetal: from the eighth week to labour.[20]

These stages comprise the various developmental phases of the baby. The salient features of these three stages can be summarized as follows:

- Pre-embryonic stage: In this first stage the zygote (the newly fertilised cell) multiplies. Within the first three weeks, after it has become a cluster of cells, it embeds itself in the wall of the uterus. As the cells continue to multiply, they form three layers.

- The embryonic stage: The second stage lasts a total of five and a half weeks, during which the baby is called the embryo. In this stage the basic organs and systems of the body take shape from the cell layers.

- The foetal stage: Entering the third stage of pregnancy, the embryo

is now called the foetus. This stage begins from the eighth week of pregnancy and continues to birth. In this stage, as distinct from the earlier ones, the face, hands and feet of the foetus become distinguishable and it takes the external appearance of a human being. At the beginning of this stage, all the organs of the 3 cm. foetus are in place. This stage lasts for thirty weeks and development continues until the week of birth.

The stages that we have briefly outlined here and the wondrous developments that happen in each stage will be explained in more detail in the pages that follow.

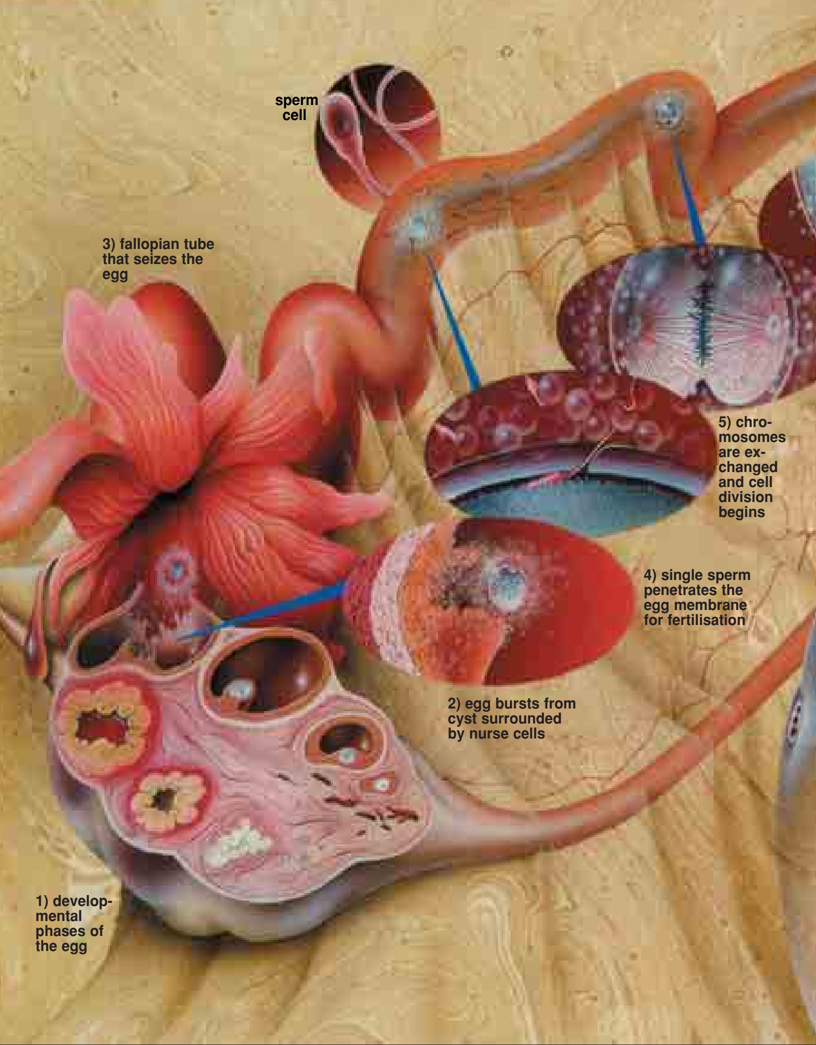
The First Cell Begins to Multiply

The cell containing 46 chromosomes that is formed from the union of the sperm and the egg is the first cell of a new human being that will open its eyes to the world in nine months. The first and single cell which contains the plan for the whole body is called the "zygote".

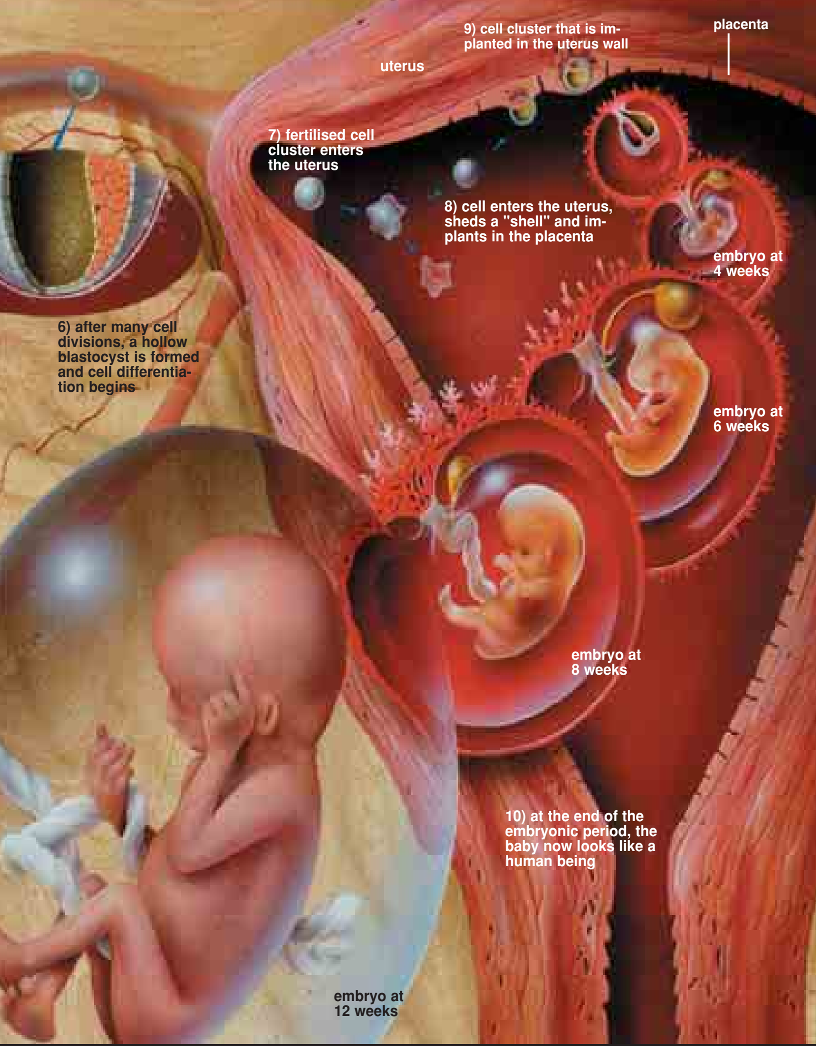
The first cell division happens 24 hours after the sperm and the egg unite. These two newly formed cells are identical to each other. With this, the first day of the 9-month period of life in the mother's womb begins. Now there are not one but two cells in the mother's womb. Later this number will increase to four and continue in this way as the division multiplies.[21]

The cells in the cell cluster in the fallopian tube continue to divide and grow and move towards the place where they will spend the next nine months. This is the mother's womb (uterus).

In this stage, the necessary changes occur in the uterus. Blood rushes into the uterus and makes it strong and resilient. As we mentioned in the previous section, the corpus luteum in the ovary increases its secretion and informs the body that pregnancy has begun. In the meantime, the zygote moves with a swimming motion towards the uterus and begins to send a biochemical signal containing the message, "I'm here!" These messages make the mother's body prepared to ensure the presence of the salt, iron, blood and vitamins needed by the foetus. At the same time, the bi-



1) Every month an egg is released from the ovaries. 2) The maturated egg breaks the covering that surrounds it and is released to the pelvic cavity. 3) The egg is intercepted by the fallopian tube making it possible for the egg to be fertilised by the sperm. 4) One single sperm manages to pierce the membrane and fertilises the egg. 5) The fertilised cells begin to divide and multiply forming a cluster. 6) At this stage a collection of cells, called a blastocyst, is formed. This is the first stage in the transformation of cells and the formation of the body's tissues and organs. 7) The cell cluster reaches the uterus with the help of the fallopian tube.



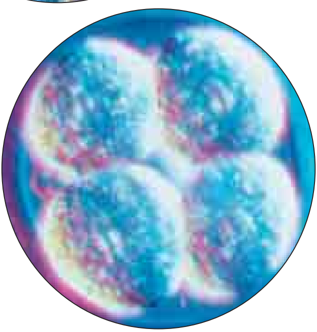
8) It begins to prepare to attach itself to the wall of the uterus. Thanks to the operation of special cells designed for the purpose, it attaches itself to the wall of the uterus. 9) If the cell mass successfully attaches itself to the wall of the uterus, it finds a protective environment where it is nourished and begins to grow. 10) At the end of the various stages of the embryonic period depicted in the picture, that is, at the end of the eighth week, a miniature person appears, 2.5-3 cm. in size. All these stages prove that human beings were created. There are signs for every thinking person in his own creation.



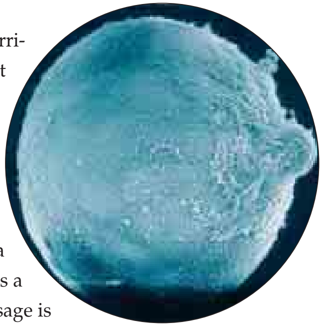
ochemical message that the zygote has secreted (the hCG hormone), reaches the mother's ovary and causes another hormone to be secreted there which prevents another period of ovulation (menstrual period) in the mother's body.[22]

The zygote is still composed of a few cells. The fact that it knows where it is and immediately sends signals relevant to the 9-month period that will follow is an extraordinary thing. How does the zygote know to whom it will send the message? How do the various organelles that receive the message know that it comes from a microscopic piece of flesh that they have never encountered before, and begin to help it by preparing an environment in which it will live? After all, the hormone secreted by the zygote is composed of molecules; so, how do the cells, in the place where these molecules are received,





After uniting with the sperm, the egg cell begins to divide. In the first division 2 cells are formed; these two cells divide internally and within a short time a cluster of cells is formed. As a result of the transformations undergone by this cluster, the vital structures of the baby are formed. After the period the baby spends in its mother's womb, it is ready in every way for life in the outside world.



know what these molecules intend by arriving at that place? When a message is sent to a human being in a language that he understands, it is possible for him to read and understand it, and to make a decision on the basis of what he has understood. But in this case, the message consists of a hormone composed of a few molecules; what sends the message is a collection of cells; what receives the message is a slightly larger collection of cells. It is certainly a miracle that cells read and understand messages (hormones) that come to them just as a human being understands a message he reads.



Moreover, how does this zygote know what materials it will need in the course of its growth?

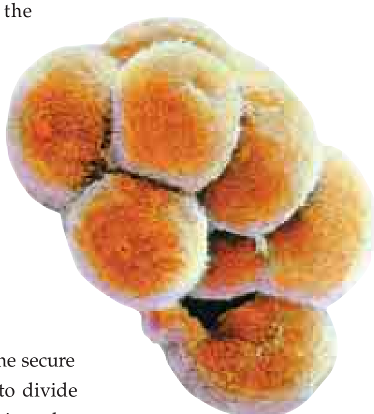
For example, think of yourself. What do you need to eat in order for your body to become strong? What minerals do



The heart, nerves, spine, arteries, lungs, teeth, bones, tastebuds—all these vital parts are formed while the embryo goes through the stages in the mother's womb. For example, at the end of the third month, the sex of the baby has been determined. The parts of the brain have been formed. At the end of the eighth month, virtually all parts of the baby's body have been formed.

you need to take? You can only learn this by studying scientific work that has been done in this area. What effects do potassium, phosphorus and calcium have on your body? From what food can you get these things? When should you take this food and how much should you take? These are things that you cannot know without consulting an expert. You, as a thinking, seeing, intelligent and feeling person, with the faculty of speech, can only know these things by seeking assistance; whereas a minute cluster of cells knows what it needs, and that it is necessary to produce it if that need is to be met; it knows who can produce what is necessary and that a signal must be sent to begin the process of production. Moreover, in spite of the fact that it has been in the body for only a few days, it knows how to send chemical information and it calculates that various organs in the body are capable of receiving this chemical information.

Certainly it cannot be said that a cluster of cells has this extraordinary information and devises a plan on the basis of it. There is a supreme power which makes these cells perform all their wondrous functions and creates them in a way that enables them to do their work. This power belongs to God, the only Ruler of the heavens and the earth. As a proof to us of His eternal power, God has inspired microscopic, unconscious, living cells, in a way that the human mind could never comprehend, to perform their complex work to perfection.



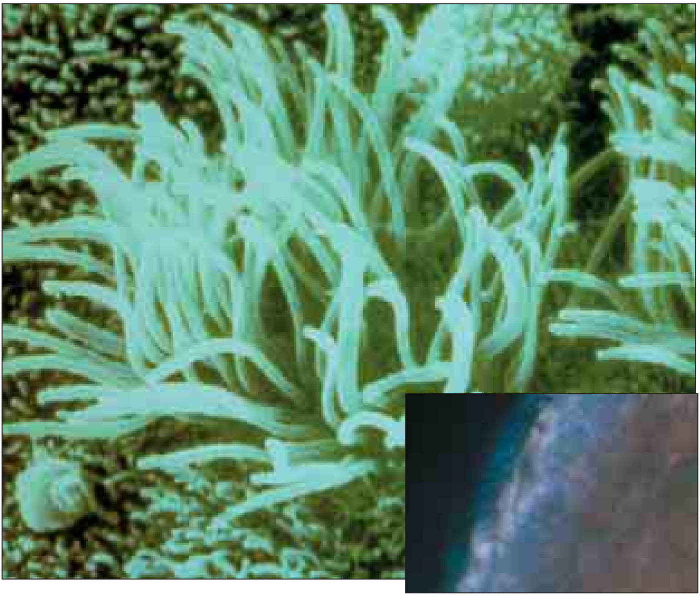
The outer appearance of a mass of cells formed by cell division is like a piece of flesh.

The Cell Cluster Begins to Move

The cell cluster moves towards the secure place prepared for it and continues to divide from day to day. Every 30 hours a division takes

place. Dividing exponentially by 2, 4, 8, 16, etc., the cells gradually come to form a small cluster; moving together with unsuccessful sperm cells, it goes slowly from the fallopian tube towards the uterus.

If you magnify the fallopian tube and examine what happens in it, you will see what appears to be the bottom of the ocean. This cluster of cells can continue on its way because of the undulating movement in the fallopian tube. This movement, which had assured the fertilisation of the egg by pushing the sperm towards it, this time carries the egg to the uterus. Small hairs (cilia) found on the surface of the cells of the fallopian tube move in the same direction. In this way, they carry the egg cell as if



When we look at the motion in the fallopian tube, we get the impression that we are looking at the bottom of the ocean. (small picture) The tiny hairs in the fallopian tube (above) make an undulating motion, which helps the egg move towards the uterus.

carrying a very precious object, towards the place where it must go.

Here, as if all the elements involved in this function have received a command from a common centre, they begin at once to work towards the same goal. This command is such that very different areas of the body perceive it and carry it out.

While it is in the fallopian tube, the cluster of cells goes through a number of stages of division. A cluster of about 100 cells enters the uterus. But in order to effect this division, the cells must be nourished. This requirement can be regarded as an important aspect of the miracle of human creation. God has created the fallopian tube so as to respond to the needs of the zygote. In this waiting period, secretory cells alternate with the small hair-like cells lining the fallopian tube. The secretory cells produce large quantities of secretions including organic molecules, ions and water for the nutrition of the zygote.[24]

"…the uterus increases in size to protect the embryo. The fallopian tubes do what is necessary to nourish the cells…" In sentences like these we have spoken up to this point about the tissues and organs that protect the cell cluster that formed after the egg and the sperm united, take the appropriate measures to ensure its nourishment and work to accommodate these cells. It must not be forgotten that these organs and tissues are also composed of cells. So, how can it be that one cell can sense the need of another and, at exactly the right time, undergo the changes required to nourish and protect it?

When we consider this question, the first answer that comes to mind will be that there is an intelligence that controls the cells. No one will think of a fairy tale in which "one day the cells begin to undergo a change by chance and that afterwards these cells somehow become able to produce the nourishment required by the zygote, then go on to sustain these wondrous occurrences that happen in all women." It is clear that anyone who makes this claim will be accused of fabrication. The preparations that the uterus makes to accommodate the embryo and the particular characteristics of the fallopian tubes which allow them to provide nourishment for the zygote, are operations which exist only in the knowledge of God.

Uterus: A Safe Haven Created for the Embryo

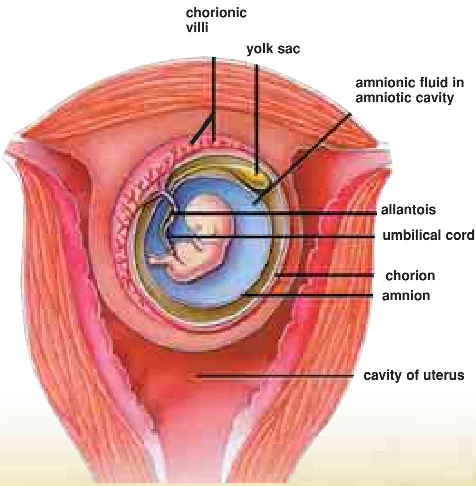


The uterus is a hollow, muscular organ that weighs about 50 grams. Certainly this is not big enough for a baby to develop in. Therefore, the structure of the uterus must undergo a transformation. During pregnancy, the size of the uterus grows steadily, increasing to about 1,100 grams by the end of pregnancy. Because of this characteristic, the uterus attains the most suitable condition for the growth and development of the fertilised egg and for the emergence of a completely formed human being. Besides this, being exactly in the centre of the mother's pelvic cavity, it shelters the baby and protects it in the course of its development.[1]

In the Qur'an, God reveals the protective quality of the mother's womb and reminds us once again of His compassion for humanity:

We created man from the purest kind of clay; then placed him, a living gem, in a secure receptacle. (Qur'an, 23: 12-13)

1- Arthur C. Guyton, John E. Hall, *Textbook of Medical Physiology*, 10th ed., Harcourt International Ed., PA, 2000, p. 950



Each one of these things is a manifestation of the compassion and mercy that God has for every living thing in His perfect creation.

The Cell Cluster Attaches to the Uterus

In order for the pregnancy to continue in a healthy way, the cell cluster must find an appropriate place to lodge. A place must be chosen that affords protection and that has the characteristics that will be able to facilitate the birth nine months later. Moreover, this place must also be close to the mother's blood vessels which will provide nourishment for the baby. The most suitable place for this operation is the wall of the uterus.

The cell cluster, which advances towards the uterus from the fallopian tube, moves with an awareness of what it is doing. It is in the fallopian tube for 3-4 days but does not attempt to stop and lodge at any point there. It knows that before it reaches the uterus, no place where it attaches itself will receive it or allow it to survive. It advances towards the uterus; it finds in the walls of the uterus a place where the blood vessels are plentiful and lodges there. As a seed planted in the ground sprouts and spreads its root, so the cell cluster continues to grow, and moving deeper into the tissues that will nourish it, produces for itself new channels for that nourishment.



Say: "Am I to desire any but God as my Lord, when He is the Lord of all things?" What each self earns is for itself alone. No burden-bearer can bear another's burden. In the end you will all return to your Lord, and He will resolve for you your disputes.
(Qur'an, 6: 164)



An embryo burrowed into the lining of the uterus.

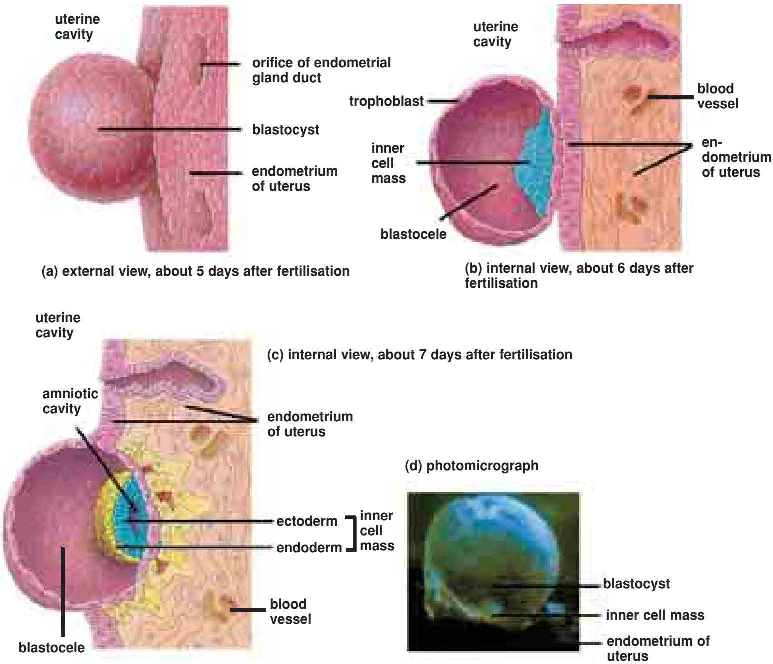
Here it is useful to notice an important point. It is a wonder that the cell cluster is able to choose the most appropriate place for itself. In his book, *Beginning Life,* G. Flanagan also asks "How does the cluster make such an astonishingly "forward-looking" selection?"

The point to which Flanagan draws attention is very important. In order to illustrate this importance, let us first consider an example. Imagine a baby that is just beginning to walk. You place this baby in a building which is millions of times larger than itself, and which it has never seen before; then you expect that the baby can find a room in this building with the most suitable environment for itself. Could a small baby do such a thing? Certainly it could not. If this feat is impossible for a baby which has not yet reached the age where it can use its mental abilities, with no experience or accumulation of knowledge, how much more impossible is it for a piece of flesh, a few centimetres in size, wandering in the dark void of a body, to find the most suitable, most comfortable and most secure place for itself?

Moreover, this cell cluster is not even a human being yet. Remember that what we refer to here is a piece of flesh composed of at the most a few hundred cells (for the moment), with no ears, eyes, brain, hands or arms. But this cell mass, demonstrating an exceptional recognition ability, lodges itself in the uterus as the most suitable place for itself.

The wonders of human creation do not stop here. In every stage of the formation of a human being, there is a wonderful chain of miraculous occurrences. We have spoken about how the fertilised egg cell multiplies and how it finds the place needed for its development. But at this stage, another question confronts us: This cell cluster, composed of cells totally similar to one another, has no special anchor or other similar organ to allow it to attach itself to a place. How then can it attach itself to the wall of the uterus?

The way the cell cluster attaches itself to the wall of the uterus is part of an interesting and highly complex system. The cells in the outer layer of the cell cluster secrete an enzyme called hyaluronidase. The particularity of this enzyme (as we mentioned before in the case of the sperm) is to



With the help of the fallopian tube, a collection of cells (blastocyst) reaches the uterus and lodges there. It is a round body without a hook or any other attaching mechanism and it is a miracle of creation that it is able to attach itself to the uterus. What allows the embryo to manage to do this is an enzyme secreted by cells in its outer layer (trophoblasts).

break down the acid layer (hyaluronic acid) in the tissues of the wall of the uterus. This enables the cells which form the cell cluster to dissolve the uterine tissue and enter the uterus. Some cells in the cell cluster dissolve the cells of the uterus, penetrate deeper into it and embed themselves securely in the wall.

As we said earlier, the fact that a cell mass can find the place most su-

ited to itself and determine that it is necessary to attach itself to that place is really an amazing thing. By its behaviour, this tiny collection of cells shows the ability to calculate its needs and to act according to this calculation. Yet, it is even more amazing that it knows how to make this attachment and that a few cells have the special ability to achieve it. It is certainly not possible that these cells, by using their intelligence and its will, analyse the hyaluronic acid on the wall of the uterus and begin the secretion of the hyaluronidase enzyme which will dissolve it.

As we explained earlier, unless a person has had special training in chemistry, he cannot give an explanation for this. However, a few cells have this chemical information and use it to perform their vital function in producing what is required to sustain their existence. Moreover, this extraordinary function is performed, not by a single cell alone, but by the cells that have formed every human being, past and present, that has ever existed.

As can be seen in what we have said on this point, in the formation of the cell cluster which will later form the embryo and in the changes undergone by the cells which shelter it, there is a definite and conscious plan. At exactly the right time, the cells which compose the fallopian tube undergo a change and, at a precise moment, the cells which surround the outer surface of the cell cluster begin to secrete an enzyme (hyaluronidase). This conscious plan shows that these functions that occur in the human body are controlled by a superior intelligence.

It is He Who forms you in the womb however He wills. There is no god but Him, the Almighty, the All-Wise. (Qur'an, 3: 6)

Cells That Perform Various Functions

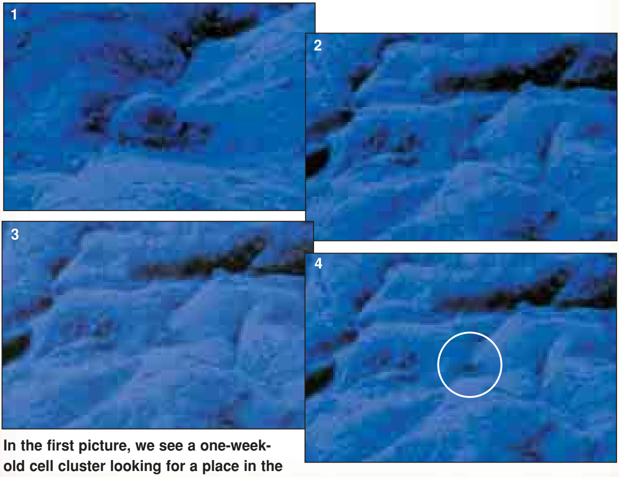
On the eighth day, the cells begin to differentiate and they arrange themselves into two distinct groupings, an inner and an outer one. The inner cell mass (embryoblast), forms the cells that the embryo will possess

The Attachment of the Embryo to the Uterus is a Miracle of the Qur'an

When we examine the verses in the Qur'an that deal with the attachment of the embryo to the uterus, we see one of the greatest wonders of the Qur'an. In the Qur'an, while referring to the embryo's attachment to the uterus and the beginning of its development, God uses the word "alaq":

Recite in the Name of your Lord Who created man from alaq. Recite: And your Lord is the Most Generous. (Qur'an, 96: 1-3)

The word "alaq" in Arabic means "something that clings, a leech-like substance". The Qur'an came down to us 1400 years ago and the fact that God uses this word to describe the development of the embryo in the mother's womb is one if its wonders. The fact that this knowledge, which could not have been discovered by the science of that period, was revealed centuries ago in the Qur'an confirms once again that it is a revelation from God, the Lord of all the worlds.



In the first picture, we see a one-week-old cell cluster looking for a place in the uterus. After finding a suitable place, the cell cluster dissolves the tissue of the uterine wall and embeds itself in it. (2-3) The embryo securely attaches itself to the uterine wall and begins to take from it the oxygen and other nutrients that it needs. (4)



Do they make things into partner-gods which cannot create anything and are themselves created; which are not capable of helping them and cannot even help themselves? (Qur'an, 7: 191-192)

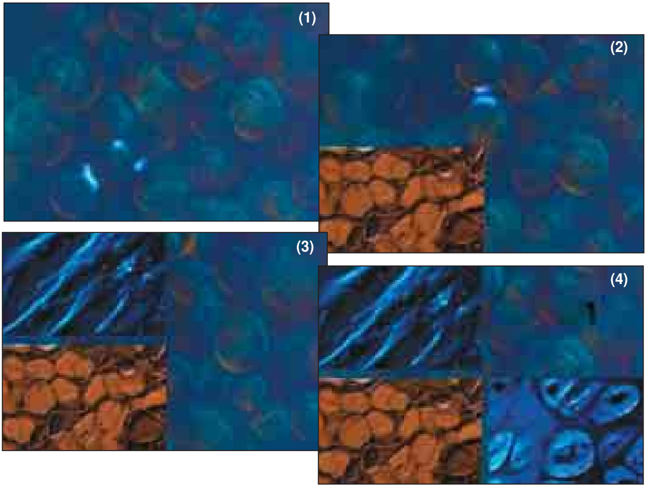
throughout its whole life. The outer group of cells (trophoblast), is composed of the cells that assist the human being in its life in the mother's womb, that is, for nine months until its birth.

The inner cell mass separates itself from the outer group of cells that will serve it throughout the nine months. The remaining region will become the umbilical cord providing the connection between the embryo and the placenta that will develop later.

At about the same time that the placenta begins to form, the inner cell mass flattens and develops into three layers of cells in what is called the "embryonic disc". The three types of cell layers are the ectoderm, the mesoderm, and the endoderm. In a process called differentiation, cells from each layer move to certain areas of the embryonic disc and then fold over to form tubes or clusters. These tubes and clusters develop into various tissues and organs of the body.[23]

Cells from the outermost layer, the ectoderm, form the brain, spinal cord, the sense organs and the lens of the eye. Moreover, this layer will form the epidermis, the sweat glands, tooth enamel, hair and nails. The innermost layer of the embryo (the endoderm) will cause the development of the organs that compose the digestive and respiratory systems (liver, lungs, pancreas, etc.) and the related glands (thyroid, thymus, etc.). The third layer (the mesoderm) is formed between these two layers. From this layer are formed the heart, muscles, bones, tendons, kidneys, glands, blood vessels, and reproductive organs. The lymphatic vessels and the epithelia (surface, or lining, tissues) which cover the most internal and external surfaces of the body and its organs also develop from this layer. The cells which compose all the tissues of the body are formed from these stem cells which develop from one of these layers.

It is very important to think about the meaning of the last sentence of the above paragraph, and to consider well the significance of what it says, because only in this way can we begin to conceive of the extraordinary development of a human being. The fact that all the elements that constitute the human body (organs, tissues, systems, blood vessels, blood, etc.) develop from the three kinds of layers that make up the embryo will

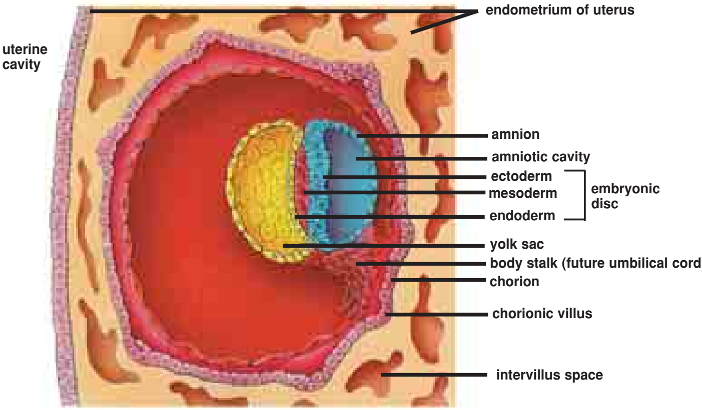


From stem cells come all the approximately 200 kinds of cells in the human body. (1) Identical stem cells suddenly begin to differentiate from other cells. With this differentiation, the tissues of the body are formed from stem cells. Fat cells which provide energy (2), cells which heal wounds (3) and blood vessel cells (4) are a few of these tissues.

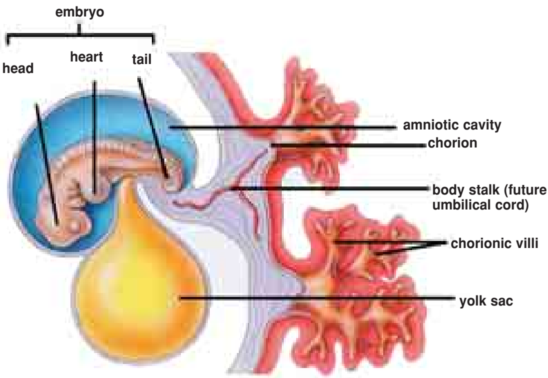
lead a thinking person to find the answer to the question: Where does this supreme intelligence that the cells possess come from?

In the meantime, there are some details that we must not lose sight of and that make these changes even more extraordinary. For example, in the course of the development of a human being, there is a perfect harmony among these three layers of cells. In order for the approximately 200 kinds of cells in the body to be produced from three kinds of cells, a definite sequence and timing is required. For example, the sequence of events in the differentiation of the blood cells and the skin cells is very different in each case. This is a remarkable phenomenon which raises a number of questions.

The Planned Activity of Cells which Gives



(a) internal view, about 14 days after fertilisation



(b) external view, about 25 days after fertilisation

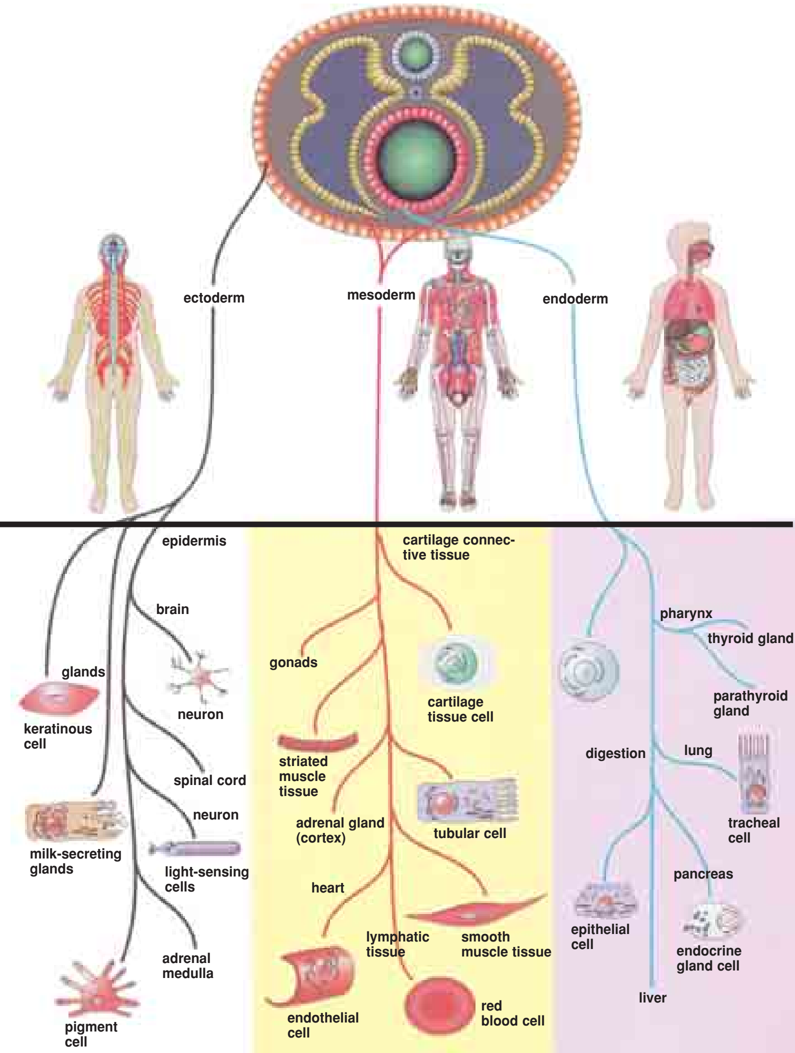
Changes in the uterus begin with fertilisation and it becomes a place where the baby will spend nine months in security and comfort. The uterus increases in size and provides a protective shelter for the embryo. All the preparations are made by cells in the uterus. There is only one explanation for the fact that these cells are aware of what another cell needs, that is, these cells move according to the inspiration of Almighty God.

Shape to The Body: How Does It Happen?

Now the cluster of cells has become an embryo, which means to "teem within." If we could watch the cells during this period, we would encounter much activity. Cells similar to one another divide and multiply at a certain time and some of these cells begin to take on a different structure from the others. This process is not evident at first, but with every passing day, it becomes clear that the purpose of this activity is to bring into being, quickly and according to a program, the functions indispensable for the construction of the human body. All the cells, very much like workers dispatched to a job, go to work in groups. Later, the groups of cells which are to form the same organ join one another to form one mass and prepare to form the organs. As a result of this intense activity, some cells will become bone cells, while others will become skin and muscle cells.[24]

The bone cells gather at the places where the bones must be. The muscle cells congregate at the places where the muscles must be. Some cells go to even deeper places and begin to form the internal organs. Some form the brain, some the eyes and others the blood vessels. In time, new processes are added; for example, the movement of the cells to their destined places and the construction of some organs by the programmed death of certain cells, etc. In short, in the course of this differentiation, a perfect strategy is employed in which the cells perform their activity according to a definite plan.

The inspiration as to how this preparation is to be made is introduced separately into every group of cells. The information written in the DNA of every cell is the same. But only when every cell group uses this information in the program which has been placed within the ambit of its own instinct, can they form the special structures needed for the organs to perform their functions. Besides this kind of differentiation, constant division causes their numbers to increase. This perfect organization never falls into anarchy. Because of these preparations made for the formation of the heart, eye, brain, arm, leg and other organs, the body slowly takes shape.[25]



In the first stages of birth, the cells make exact copies of themselves. If this multiplication were not controlled, a human being would not be formed; rather, a large piece of flesh composed of identical cells would be the result. But such is not the case. Identical stem cells later begin to differentiate. As a result of this differentiation, bones, smooth muscles, epithelium, the liver, the lungs, in short, all the body's cells and tissues are formed. Surely it is the knowledge and incomparable power of God which brings these wondrous transformations in the cells to pass, and ensures the presence of those special elements that make a person a person.

So far so good, but who gives the command to these cells which all arise out of one single essence? How can cells, which have no intelligence, awareness or feeling, understand this command and put it into effect?

Scientists have determined that the plan which dictates the differentiation of the cells and their lodging in the appropriate place in the body is written in the DNA. But this raises the question: Who wrote this magnificent plan so perfectly in this microscopic information bank hidden in the nucleus of cells?

Furthermore, who causes the cells to read this plan written in the DNA and to apply it without error? How is it that millions of different cells can find the information relevant to themselves in an immense information bank in the DNA and change their structure according to it?

For example, consider the cells which form the eyes: How can they know when the pupil is fully formed? How can they know how to structure the retina, the eye muscles, and the lens and how to give them their appropriate size? And how do they know at what point to stop these processes?

Or, how do cells which have never seen a liver, kidneys or a pancreas know the particularities of these organs and change their structure in accordance with this knowledge?

Moreover, when these cells change their structure according to the organs that they are going to form, they take many factors into consideration. For example, a cell which changes to become a brain cell must take account of the nervous system, the nourishment of the brain, the oxygen supply, the necessity of establishing a connection among all the nerves in the body; it must also distinguish the parts of the brain that see, hear and feel. Other cells take into consideration the possibility that the brain might be damaged and surround it; they evaluate the negative factors that could occur in the birth process and form structure according to these considerations. This is all very well, but how can cells display such "prescience" in their behaviour?

All these questions show that human birth is a great miracle, and the

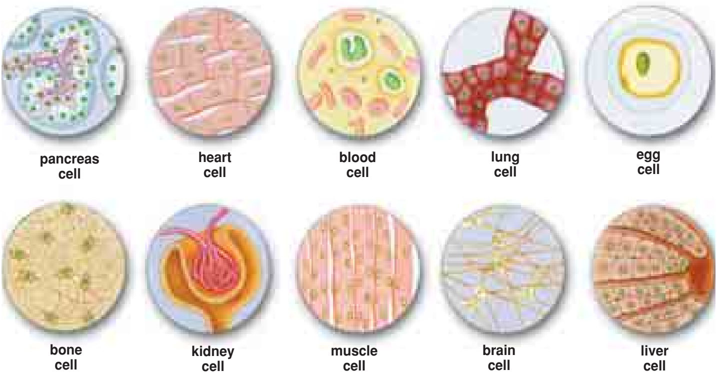
theory of evolution has at this point reached an impasse. No evolutionist can explain the extraordinary cooperation that occurs among the genes in the DNA as the cells form the organs and give shape to the body. The fact that genes, which we may define as a collection of unconscious atoms, cannot organize by chance such a conscious harmony is so evident that evolutionists generally prefer not to broach this subject at all.

Hoimar von Ditfurth, A German evolutionist scientist, has this to say about the miraculous development that happens in the mother's womb:

How a single egg cell divides to form so numerous differentiated cells, and the perfect natural communication and the cooperation between these cells top the events that amaze scientists.[26]

And G. Flanagan, the author of *Beginning Life* writes:

How is such far-reaching organization achieved? What makes the



Above we see a few of the various cells of the body. As a result of the multiplication of the initially identical cells, the approximately 200 kinds of cells in the body are formed. Despite the fact that the information written in their DNA is the same, every kind of cell uses only the information appropriate to itself. No confusion arises. Bone cells never try to form an eye or any other organ; the nerve cells do not interfere with the red blood cells. Each one knows very well where and how it will function. It is Almighty God, the Ruler of all, Who ensures this flawless organization and inspires the cells of the body as to what they have to do.

cells act as if they know where to go, and what to be, and what to do when they get there? And also act in such harmony with their fellow cells?[27]

In the answer he has tried to give to these questions, Flanagan is far from being able to explain these wondrous occurrences.

> These big questions take us into the world of the almost infinitesimally small molecules within the cells, primarily those that compose the genes and make up the genetic programme. Since the advent of molecular biology, it is for the first time becoming possible to detect and describe some of these processes. "Life's book, it seemed, was suddenly laid open…", although only some fascinating pages of it. We are still far from understanding the whole story.
>
> It is clear that cells work together so well because there is a continual molecular dialogue between them and they adapt their intrinsic genetic instructions accordingly. The instructions are held in the genes in the form of the so-called genetic-code, spelled out in the arrangement of molecules, like letters of a special alphabet. The genetic programme for the baby, spelled out in that code, was achieved on the first day in the union of parent cells. From then on, every time any cell divided and gave rise to two new cells, a precise replica of all the genes was made and passed along to each new cell. Therefore every cell of the body carries exactly the same genes, and holds the full genetic programme.
>
> Every cell might simply go on to produce clones of itself, all with the same destination and function, if the full programme were to be active all the time. What makes for the great variety of cells produced,

It is God Who created the seven heavens and of the earth the same number, His Command descending through all of them, so that you might know that God has power over all things and that God encompasses all things in His knowledge. (Qur'an, 65: 12)

> and for their dispersal to all their different destinations, is the fact that genes can switch on and switch off. Not all of them are operative all the time. This happens in response to signals from fellow cells as they all fit themselves into the elaborate programme of development.
>
> These events may be visualized as an exacting building task requiring close co-operation. Each knows the grand plan, each gives out signals, and in turn sensitively responds to the signals from others to become integrated into the whole project. The cells of the embryo work in a comparable way, in companionable agreement, with genes switched on and off as required.[28]

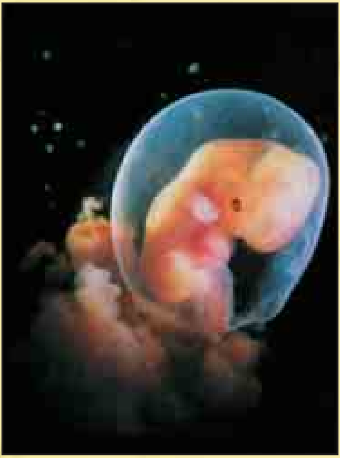
As can be understood from the above explanations, the fact that the cells differentiate from one another and take on completely different functions is said to indicate that there is a "genetic program" which causes them to act within a determined plan. It is true that a perfect program is implanted in every cell, but the important thing is this: Who created this program and implanted it in the cells? The program we speak of here is not like an ordinary computer program. By applying this program, the cells bring into being a human person who has within himself millions of interrelated complex organic structures: a person who can hear, see, feel, think, make decisions, experience joy, appreciate beauty and who can study his own cells and DNA, and draw conclusions from his investigations. Moreover, it is certainly a miracle that the masses of protein which we call cells can understand such a program, act according to it, become aware of what is required and complete every stage perfectly.

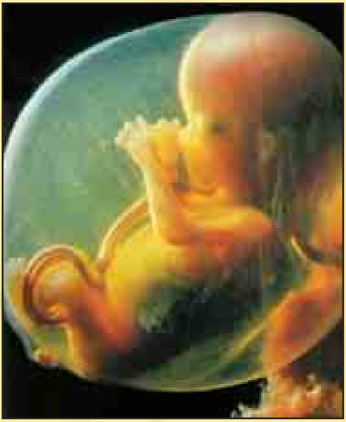
Richard Dawkins, a well-known modern evolutionist, is at a loss to explain how, in the formation of a human being, the genes which contain the human genetic program act together with such a degree of cooperation.

> Embryonic development is controlled by an interlocking web of relationships so complex that we had best not contemplate it.[29]

Dawkins has understood that the relations among the genes responsible for the miraculous creation of a human being and the extraordinary

Cells Shape the Body…






The stages in the formation of a human being constitute a chain of wonders. Cells uniting according to a certain order give shape to the body. They construct the hands, the eyes, the ears, the blood vessels, the legs, the heart, the brain and the nerve cells. In the DNA of every cell is contained an enormous amount of information relative to every detail of the human body. But the cells in the embryo find and read among all this information only that which pertains to their particular organ. According to this information, cells build the organs and the tissues. How a cell can interpret the information in the DNA is certainly something worth thinking about. Who wrote the information contained in the DNA in the nucleus of the cell? Who programmed cells so that they can read this information just like a human being and act according to it? There is only one answer to this question: God created human beings perfectly. It is He Who inspires in cells what they are to do.

abilities demonstrated by these genes could not have come about by chance, that it is not possible to account for such a complex system by the mechanisms of evolution, and has thus made such a confession. But he still misses a very important point: In the same way, it is impossible that, in the chain of miracles that produces a baby, not one bit of what is required to make this baby, not one single cell, has come into being by chance. Within a period of nine months, one cell formed in the mother's reproductive organs turns into a seeing, hearing, feeling, breathing, thinking human being, and this transformation occurs according to a plan perfect in its every detail. Moreover, this miracle has gone on continuously with the same perfection for countless numbers of years.

According to the claims of evolutionists, this is all due to chance; for them, this miracle comes about as a result of the decision of unconscious atoms which produce the human cells. They claim that one day, the atoms suddenly decide to come together and produce organs that they had never seen or known before. They cling so blindly to their illogical claims that they believe that each of these unconscious atoms decides which part it will form and goes to the appropriate places according to this decision. They believe that everything happens as a work of chance without intervention; that the cells and the atoms determine by their own wills the best action to take, and perfectly construct a human body. Even if they do not want to accept what is being said here, this is exactly the substance of what they claim.

At this point it is clear in what an enormous logical impasse evolutionists find themselves. Every detail that has been explained up to now and in what will be dealt with later shows that, contrary to the evolutionists' claims, the stages that occur in the formation of a human being cannot have happened by chance. These extraordinary occurrences happened not by the work of cells or the organelles that brought them into being; not by the activity of molecules or atoms, but by the word of Almighty God, "Be":

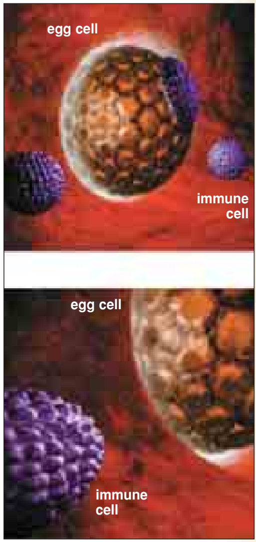
It is He Who created you from earth, then from a drop of sperm, then from an alaq (embryo), then He brings you infants into the world; you

Awareness Demonstrated by the Egg Cell

The cells which make preparations to lodge in the walls of the uterus are genetically different from those of the mother. Why they are not rejected like an organ or a tissue transplanted to the mother's body has been for a long time an unsolved mystery. R. Flanagan explains it this way:

> ...The cell cluster suppresses its genetic markers and instead gives out special signals that can be compared to a universal password. This password is the same for all people and is the same one that the mother's cells expressed when she herself was just such a cluster. Therefore, her cells do not now mobilize defences against the new arrivals, because they biologically recognize the nesting cluster as universal friend, not foe.[1]

Attention must be drawn here to a very important point. As Flanagan says, it is a very great mystery how a group of cells sends a "universal message" to another group of cells which receives this message and "understands" that they are meeting not an enemy but a friend. It must be remembered that we are not talking here about a group of human beings, but a mass made up of cells too small to be seen with the naked eye; a mass which has no hands, eyes, ears or brain, composed of unconscious atoms, molecules and proteins. Surely to expect such a demonstration of awareness from cells is extremely illogical.



Immune cells of the mother approach to destroy the embryo. (above) However, a perfect design in the body does not let them cause harm to the egg.

The truth confronting us is clear: What ensures that the embryo lodges easily in the mother's womb and survives there is the mercy of God, Who created the embryo, the mother and the mother's defensive system.

> **Truly, God has knowledge of the Hour and sends down abundant rain and knows what is in the womb. And no soul knows what it will earn tomorrow and no soul knows in what land it will die. God is All-Knowing, All-Aware. (Qur'an, 31: 34)**

1- Geraldine Lux Flanagan, *Beginning Life*, Dorling Kindersley, London, 1996, p. 34

reach manhood, then you decline into old age though some of you may die young so that you may reach a predetermined age and so that hopefully you will grow in wisdom. It is He Who ordains life and death. When He decides on something, He need only say: "Be!" and it is. (Qur'an, 40: 67-68)

The Special Protective System Prepared For the Embryo

The cells which attach to the mother's uterus continue to develop and be nourished in this secure place. But this is an amazing thing, because the quickly growing embryo is normally confronted by a serious danger—the mother's immune system.

The immune system regards every kind of foreign material entering the body as an enemy and attacks it. The embryo's genetic make-up is different from that of the mother and, for her body, it is a foreign organism. The moment the mother's defensive cells become aware of the presence of this foreign organism, they rush towards the uterus. If no special precautions were taken, the defensive cells would surely kill the embryo.

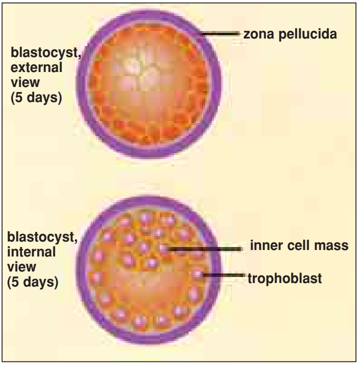
But there is no such occurrence under healthy conditions, because the embryo is taken from the beginning under special protection.

Before the embryo attaches itself to the wall of the uterus, trophoblast cells begin to form around the surface of the embryo, forming a kind of filter between the mother's blood vessels and the embryo. The mother's immune cells are unable to detect the trophoblastic tissues because they lack some proteins that most other cells carry and which help the immune cells to detect them. Thanks to this characteristic of trophoblast cells, the embryo is protected from assault by the maternal immune system. Moreover, some of the trophoblast cells assist in causing oxygen, nutrients and other necessary substances to reach the embryo.[30]

Now, let's examine in detail the special structure of these cells.

The Engineering Ability of the Trophoblast Cells

As we explained in the previous pages, despite the fact that the trophoblast cells have multiplied from the same egg cell, they separate from

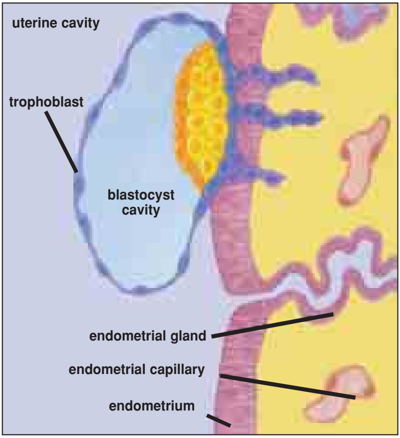


Trophoblast cells separate from all the other cells which form the embryo. They are a group of cells which support the embryo in every detail of its development in the mother's uterus. Because of the balance that these cells establish between the mother and the embryo, the development continues safely. For example, these cells prevent pressure on the embryo from the mother's blood vessels or elements of the mother's protective system from damaging the baby. It is surely God Who ensures that these cells are aware of what the baby needs.

the cells which form the embryo; they are a group of cells that perform all the supportive activities relative to the embryo's development in the mother's womb. On the seventh day, these cells send out projections in every direction and begin to grow. The purpose of this change is to penetrate into the wall of the uterus. During this passage, they meet the mother's blood vessels and penetrate their outer surface. So, within 7-8 days, the embryonic tissue becomes connected to the mother's blood.

Some trophoblast cells produce enzymes to destroy the membrane of the blood vessels in the wall of the uterus. In this way, the pressure exerted by the mother's blood on the embryo is lessened. The trophoblast cells go into action as if they were aware of an immanent danger and take measures to prevent anything that would result in the death of the embryo. If these cells did not make such an adjustment in the mother's blood vessels, the mother's blood would flow in under high pressure. In this situation, the blood circulation in the embryo would stop as a result of the outside pressure of the mother's.

In subsequent weeks, a number of these special cells again form a buffer between the embryo and the mother's blood. This buffer is called the "placenta" which has a very particular structure. When we look closely, we see that the trophoblast cells form this buffer to act as a blood



On the left we see an embryo embedded in the walls of the uterus (blastocyst). The embryo finds a place in the uterus where there are plenty of blood vessels and lodges there. Just as a seed thrown on the ground spreads out roots and sprouts, so the embryo continues to grow and makes for itself new channels deep into the tissues that will supply its nourishment. What accomplishes this are special cells, called trophoblasts, in the outermost layer of the embryo.

stopper. This is a very important feature, because the embryo is now connected to the mother's tissues and will be fed by the nutrients coming from the mother's blood. It is necessary for the nutrients to enter, but it is very important that the defensive cells in the mother's uterus not reach the embryo along with the nutrients. So, the stopper system formed by the placenta prevents the defensive cells in the mother's uterus from approaching the embryo. But if the flow of blood from the mother is blocked, how is the embryo to be nourished?

The answer to this question shows the perfection of the design found in the structure of the cells. Tiny empty spaces found among the cells which serve as the stoppers, are of such a size as to allow the nutrients needed by the embryo to be drawn from the mother's blood plasma. Oxygen, nutrient material and minerals from the mother's blood, pass through these spaces and reach the embryo. But the defensive cells, because they are so large, cannot pass through these spaces.[31]

If we think of the bridge that they establish between the mother and the embryo, it would not be wrong to say that the work done by the trop-

hoblast cells requires a flawless knowledge of engineering. With the system that they construct, they really establish the foundation of a "bridge of life" between the mother and the baby. These cells act as a stopper to prevent dangerous material from entering the blood and, by leaving spaces between themselves, they allow the appropriate material to pass.

What we have said here describes only a few of the functions of the trophoblast cells, but it is enough to give an idea of the perfect design of these cells. In all the adjustments they make, they leave vacant spaces forming a system which both determines what material is beneficial and allows it to pass; they know what material is dangerous for the embryo and do not permit it to enter. It is very clear that such a structure could not come about by chance.

Anyone who claims that all these extraordinary features are the result of chance, will certainly be unable to answer the questions below:

How do these cells know what the embryo needs for its development?

How do they determine which material out of the several materials carried in the blood is beneficial?

How do they know that the immune system cells will be dangerous for the embryo?

How do they determine in advance the size of the material that will harm the embryo?

How do they have the knowledge to make a filter to prevent the passage of harmful material and to allow the passage of beneficial material?

In order for the human race to continue, this system cannot have the slightest error. Anyone with intelligence and awareness knows that chance did not give these cells their particular characteristics. Chance cannot produce a design and make this design exactly the same in every human being. It is God Who creates the trophoblast cells with all their special characteristics and directs them in their supportive role in the formation of a human being. This is only an example of the matchless creative art of God:

We have not created the heavens and earth and everything between them except with truth and for a set term. But those who disbelieve

turn away from Our warning. Say: "Have you thought about those you call upon apart from God? Show me what they have created on the earth. Or do they have a partnership in the heavens? Produce a Book for me revealed before this one or some other shred of divine knowledge, if you are telling the truth." (Qur'an, 46: 3-4)

The Placenta: The Bridge of Life

Life support systems produced by the latest technology, used in most hospitals and valued at millions of dollars, are primitive and nearly useless when compared with a piece of flesh weighing only a few kilograms. This piece of flesh is the placenta, called by scientists "the real hero of birth".[32]

At a particular time the embryo begins to take nutrients, oxygen and other material from the mother's blood. The placenta, which is created to supply all the needs of the developing foetus, acts as a bridge ensuring the passage of this material between the mother and the foetus (From the beginning of the third month, the embryo is called a foetus). The placenta is filled with soft blood vessels which will carry to the baby the nutrient material seeping from among the trophoblast cells; it sends all this nutrient material, oxygen, and important minerals such as iron and calcium that come from the mother, first to the umbilical cord and then to the capillary vessels of the foetus. Moreover, the placenta not only ensures the supply of nutrients needed for the metabolism of the foetus, it also chooses and transports to the foetus the nutrients needed for the formation of its tissues.[33] Amino acids are required by the foetus for all kinds of syntheses (carbohydrates, nucleic acids the building blocks of DNA, fats, etc.) The placenta selects these elements and takes them from the mother's blood. This is generally done by special carriers. It stores the elements, uses what is necessary for itself and sends a portion of them into the blood of the foetus. Besides the nutrients, ions pass through the placenta; two of these are especially important for the foetus, and it is necessary that they be stored in large quantities. Of these, one is iron, needed to increase the blood volume; the other is calcium, required for the development of the bones. The transfer of these elements is particularly effective: even if the



The placenta is a vital bridge between mother and baby.

mother has consumed little iron, the placenta extracts the amount required from the mother's blood, supplies the baby's needs and protects it from every kind of danger.[34]

The placenta also expertly performs the reverse operation, carrying waste material from the foetus to the mother's blood.

It must not be forgotten that the placenta, which we have described as "choosing", "taking"' "storing" and "carrying" is a tissue composed of cells. It is the placenta which performs all the activities denoted by the verbs listed above; for example, it knows that there is a need for iron, and it is able to choose the element iron from among other substances and it knows how the iron it selects will be used. It is not a human being which has this knowledge but a collection of cells called the placenta. The cells which constitute the placenta recognize the material they need and are able to select it, and the fact that a cell can recognize an element is surely a miracle. In addition to recognizing this element, it is even more miraculous that it can take the appropriate material in the required amount and carry it to a particular location. The information given so far and that will follow must always be appreciated with this in mind.

The events that occur in the miracle of human creation indicate a consciousness displayed by the cells, and by the molecules and atoms that produce the cells. Indeed, this consciousness does not belong to any of them, but to God Who creates them and inspires in them the functions that they are to perform.

All the details we will examine in the following pages are also a clear proof of creation.

Other Vital Functions of the Placenta

The umbilical cord, which joins the foetus to the placenta has three blood vessels and looks like a long rope. One of these blood vessels is called the umbilical vein. It sends blood containing nutrient material and oxygen from the placenta to the baby. The other two of these vessels are called the umbilical arteries which transport blood containing carbon dioxide and





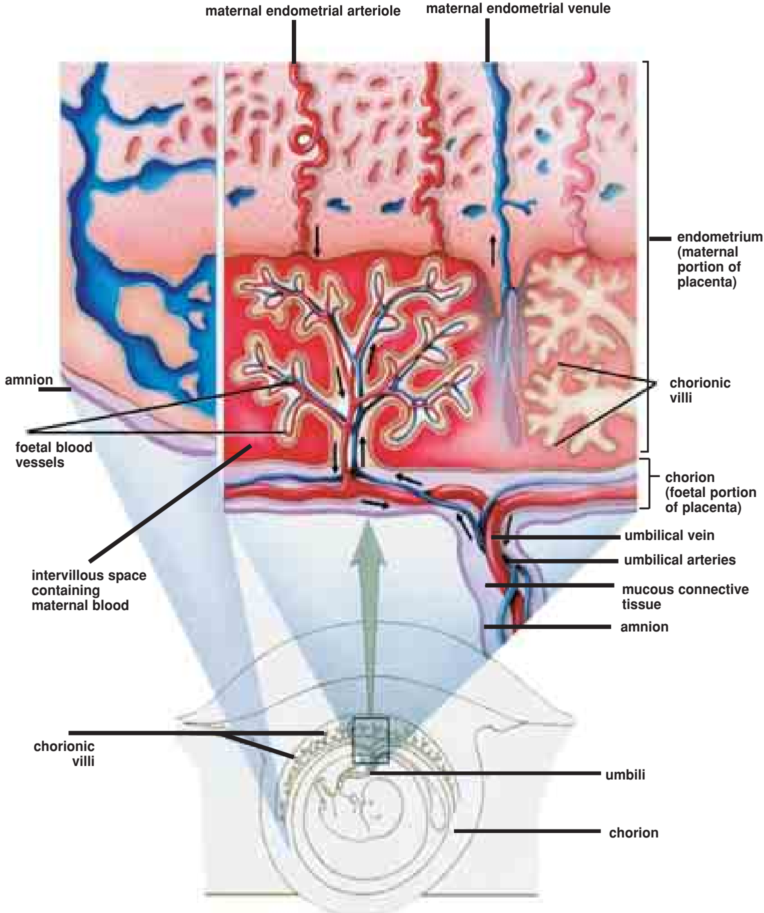


Three different tubes pass through the umbilical cord, which provides the connection between the baby and the mother's body. One of these tubes carries nutrients and oxygen to the embryo. Because of this, although the embryo lives in an environment filled with fluid and its lungs are filled with this fluid, it does not drown; and although it does not have a digestion system and cannot eat, the embryo does not die of hunger. The other two tubes remove the waste produced by the embryo. It can be seen that the embryo is created according to a perfect design.

waste produced from the nutrient material from the baby to the placenta.

Due to the strong and flexible structure of the umbilical cord, it does not coil and cramp easily. It is very important that there be no problem with the delivery of blood. Moreover, the flexible structure of the cord makes it possible for the baby to move.

From the point of view of its functions, the placenta is created to act for the foetus, sometimes like a liver and stomach, and sometimes like the intestines and kidneys. Moreover, the placenta does not perform its functions



The organ that calculates the changing needs of the foetus and responds to these needs without deficiency is the placenta. The cells in the outer layer of the placenta form a kind of filter between the mother's blood vessels and the foetus. For example, while permitting the passage of nutrient material, they deny entrance to the elements of the defensive system. The placenta is composed of cells. How do these cells know what the foetus needs? How do they understand what cells they must protect the foetus from? How do they distinguish what the embryo needs from among millions of molecules? Who gave this expert ability to the piece of flesh called the placenta and to the cells of which it is composed? It is surely God Who has taken all precautions so that the baby may survive and has created a system in the body for this purpose. God is Well-versed in every kind of creation.

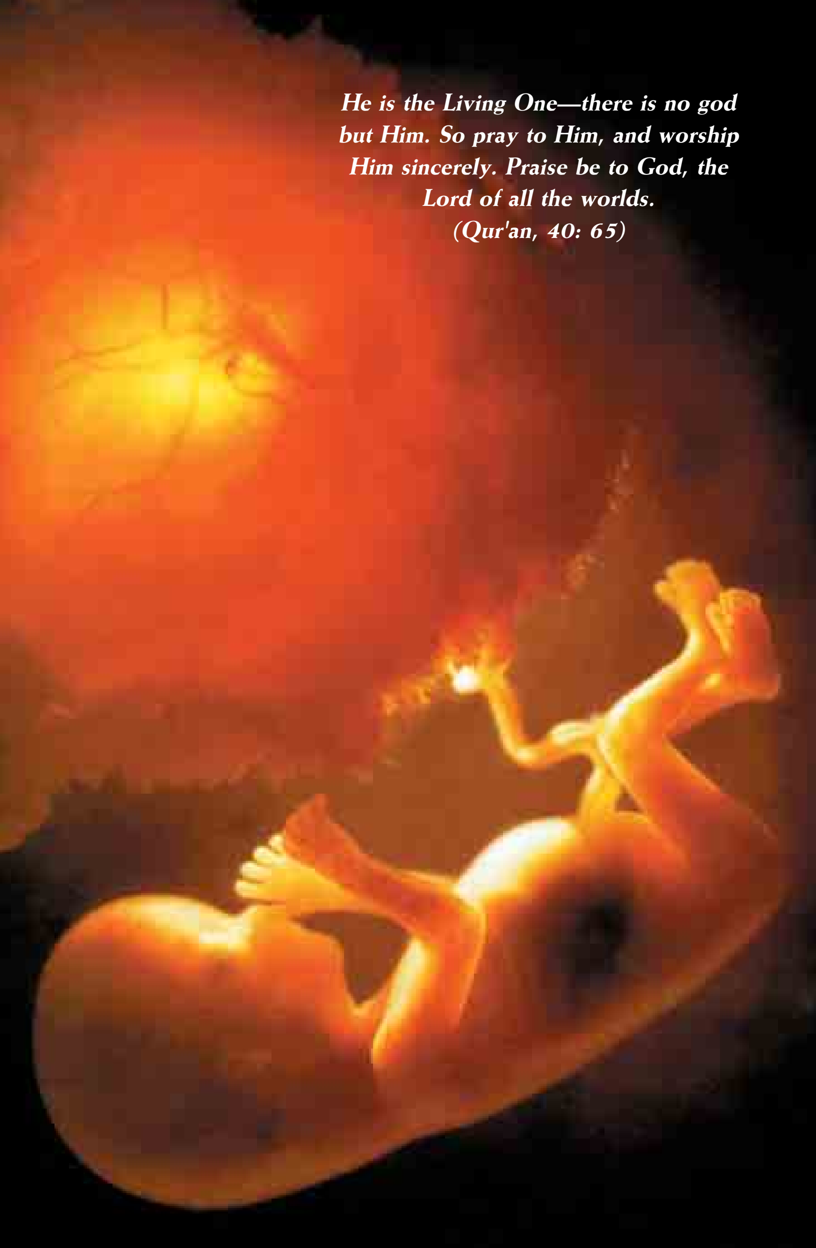
according to a fixed order, but keeps the changing needs of the baby in view. For example, the food the foetus needs in its first and second months is different from the food it needs in its eighth and ninth months; but the placenta makes adjustments for this and effects a perfect balance, selecting the food that the baby can most easily digest in each period of its development.

One of the most important functions of the placenta is to secrete the hormones (eg. oestrogen and progesterone) required by the foetus. Of these hormones, progesterone has a special effect on decreasing the contractility of the uterus in the mother's body and gives physical support to the baby. In order for the baby's development to continue, it makes possible the formation of the most comfortable environment. Moreover, it allows the development of the milk glands in the mother's breasts and, at the right time, helps in the production of milk. Besides this, it gives support by boosting the mother's metabolism, thus contributing to her health and comfort. These hormones ensure that the uterus will become a comfortable and secure place for the embryo, and their secretions in the proper way and in the appropriate amount are very important for the baby to have a healthy birth. In addition, these hormones prepare the mother's system for the birth.

Together with all these functions, the placenta ensures that the baby is immune to any infections that may occur in the last three months of the pregnancy.

What we have described up to this point are only a few of the functions undertaken by the placenta during the development of the baby. And, in everything that we have described here, there is an unimaginable amount of detail. Every system depends on the functioning of many complex chemical operations.

Moreover, every new research conducted about the development of the foetus reveals a new function that the placenta performs on behalf of the baby. But in all this there is a common point. Every activity of the placenta binds the mother and the embryo to each other in a perfectly harmonious union. This union is of the greatest importance because, if even one of the balances ensured in the mother's body were to be upset, the



He is the Living One—there is no god but Him. So pray to Him, and worship Him sincerely. Praise be to God, the Lord of all the worlds.
(Qur'an, 40: 65)

embryo could not survive.

The fact that an organ formed from cells is aware of the needs of a living thing, determines what is needed and acts with the knowledge of how to supply the need; and the fact that this organ can produce the required material in the correct proportion, select and appropriate it from outside; in short, that such an organ can display conscious activity is not something that it can do by its own unaided efforts. For example, if a human being were required to perform the same function, he would not be able to do it. To understand what a foetus needs and when to take the measures required; to choose the appropriate material and to repel unwanted material are things that a person without medical training cannot do. (Even a person with medical training could not continually, day and night, perform this duty without making a mistake.)

But these duties that a human being cannot perform, can be effected efficiently and flawlessly by this organ we call the placenta. And the placenta of every one of the millions of human beings who have lived throughout thousands of years has demonstrated the same deep awareness and perfect performance. Indeed, the perfect structure of the placenta and its conscious activities are the result of God's creating it with all of these characteristics. To claim the opposite would be to step beyond the limits of intelligence. With the excellent design that He has created in the human body, God shows us His incomparable art, and commands us in the Qur'an to consider these truths:

> **He is Lord of the heavens and the earth and everything in between them, so worship Him and persevere in His worship. Do you know of any other worthy of His Name? Man says, "When I am dead, will I then be again raised to life?" Does not man recall that We created him before when he was not anything? (Qur'an, 19: 65-67)**

In the subjects to be discussed in the following pages, there is an important point which should not be forgotten. As we have seen in the examples given so far, all the units of the human body which act according to a plan, perform their various duties in due time, know at which

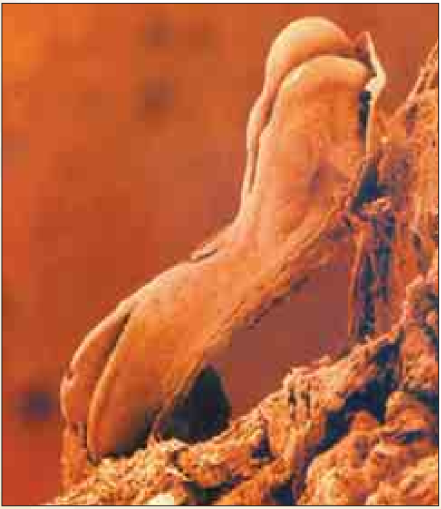
FROM ONE CELL TO A LUMP OF FLESH...

Cells continue to divide and multiply over a period of time, forming eye cells sensitive to light, nerve cells to perceive bitterness, sweetness, pain, heat and cold, ear cells to sense sound waves, cells of the digestive system to process food, and many others.

After the embryo's first three weeks, the multiplying cells take on the appearance of a lump. In the Qur'an, this development is revealed as a change from an "alaq" (embryo) to a "lump":

Then We formed the drop into an alaq (embryo) and formed alaq into a lump and formed the lump into bones and clothed the bones in flesh, thus bringing forth another creature. Blessed be God, the Best of Creators! (Qur'an, 23: 14)

It has only recently been discovered in the science of embryology that the first phase of a baby's formation ends with this kind of development. But this scientific fact was revealed 1400 years ago in the Qur'an, which is perfect and without error, sent down by God, Lord of the universe. Exalted is the Majesty of God.



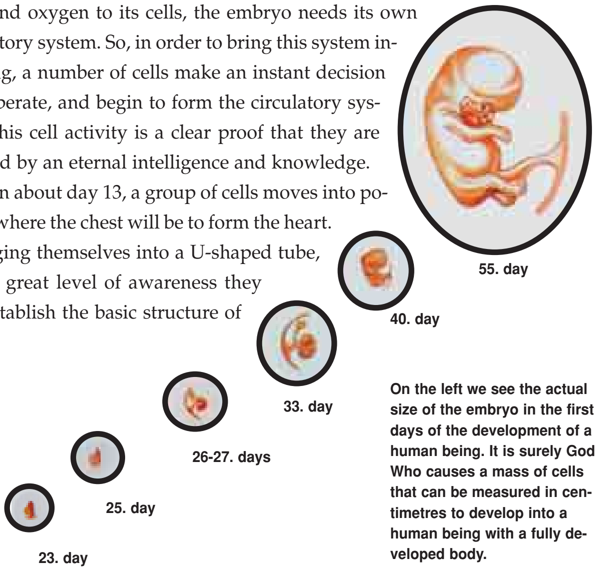
In the picture on the left, we see a three-weeks-old foetus attached to the wall of the uterus. This mass of cells resembling a piece of flesh will continue to divide and, in time, the eyes which allow us to see, the nose which permits us to smell, the feet with which we walk and run, and the hands and internal organs will be formed from these cells. This marvellous transformation cannot come about by chance. It could not happen by itself. It is God, the Lord of all the worlds, Who has ordained all these flawless transformations in the body.

point to stop, do not leave their place of duty, can work in a team, make selections to meet certain needs and produce the requisite material at the right time, are all cells. As we shall see in some detail later, in the acts of these cells, which are too small to be seen by the naked eye, there is an obvious intelligence, and this intelligence does not belong to the cells. Cells composed of unconscious and lifeless atoms cannot have the capacity to think and make decisions. This supreme consciousness and intelligence belong to God. To keep this truth continually in mind is important; it is the means whereby the individual may deepen his awareness of these wondrous occurrences, and witness God's eternal power.

The Body Continues to Take Shape

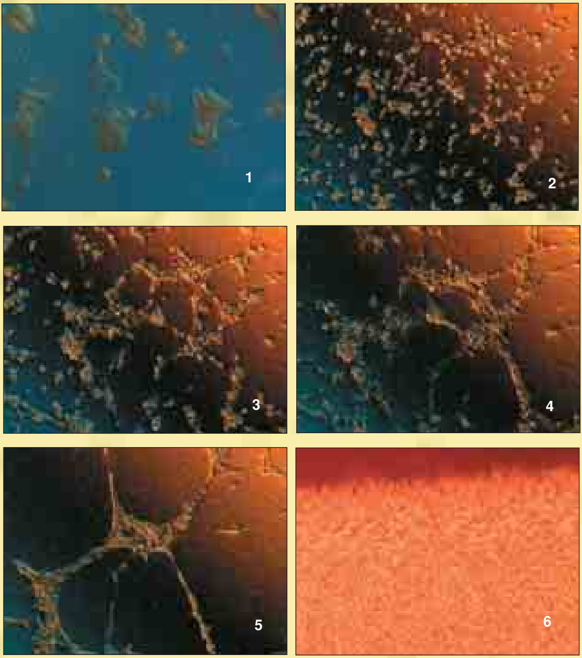
In the first days the embryo takes the nourishment it needs only from the mother's blood. Now, in order to nourish its own body and send oxygen to its cells, the embryo needs its own circulatory system. So, in order to bring this system into being, a number of cells make an instant decision to cooperate, and begin to form the circulatory system. This cell activity is a clear proof that they are directed by an eternal intelligence and knowledge.

On about day 13, a group of cells moves into position where the chest will be to form the heart. Arranging themselves into a U-shaped tube, with a great level of awareness they first establish the basic structure of



On the left we see the actual size of the embryo in the first days of the development of a human being. It is surely God Who causes a mass of cells that can be measured in centimetres to develop into a human being with a fully developed body.

The Miraculous Formation of the Circulatory System





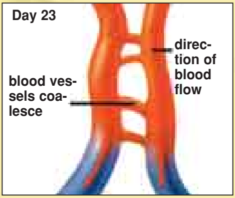


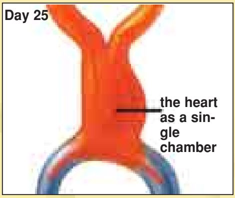
These cells, disposed independently of one another, are actually the cells of the blood vessels. (1-2) A little later, these cells suddenly come together and begin to form a connection among themselves. (3-4) The cells form the blood vessels. (5-6) Finally, they construct a perfect system of conduits with no cracks or perforations. The internal surface of the blood vessels is so smooth that it could have been made by hand. The total length of the blood vessels is more than 40,000 km. This is as long as the entire circumference of the earth. This magnificent design is from God, the Lord of the all the worlds.

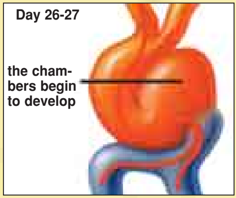
the heart. Then, as if they had heard that the formation of the heart had begun, thousands of other cells begin to construct the blood vessels that will extend all around the body. So, with their conscious deployment to the appropriate places, the formation of the blood vessels is completed around day 21. Now, the circulatory system is ready to function, and after its first beat about day 25, the heart will maintain a rhythm of 60 beats a minute during its first month of development.[35] The first contractions move throughout the whole length of the heart like a wave, but when the formation of the heart is finished, the contraction is distributed among the different chambers.

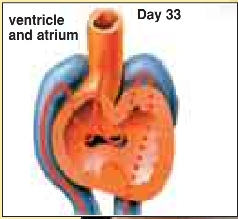
The heart begins to beat, but there is no blood yet. For this also there are the appropriate cells. These cells, in fact, calculate in advance that the newly formed human body will need a substance called "blood", and they turn into blood cells. Before long, blood starts to flow in the blood vessels. At the end of four weeks, blood begins to fill the heart and the blood vessels completely. Indeed, the formation of the heart, the circulatory system and the blood is in itself an astonishing thing. While none of these yet existed, the cells, executing a perfect plan and going to the right place at the right time, construct the circulation system indispensable for human life. None of the stages we have outlined here is the result of any chance operation; this perfect plan of construction cannot possibly be made by cells which came into being from one single cell. At this point too, what confronts us is the evident truth of creation.

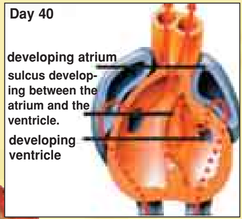
Not only the formation of the circulatory system but also the characteristics possessed by every element of it are created in an astonishing balance. The blood of a baby developing in its mother's womb has many more special qualities than that of a mature individual. For example, the haemoglobin in the baby's blood is able to hold more oxygen than that of an adult. The number of red blood cells in one cubic centimetre of the blood taken from an embryo is higher than that found in the same volume of blood from a newly born baby. At fourth months, the cord can carry a circulation equivalent to 24 litres a day between the baby and its own placenta. This circulation flows in constant round trips, bringing supplies to the baby from the

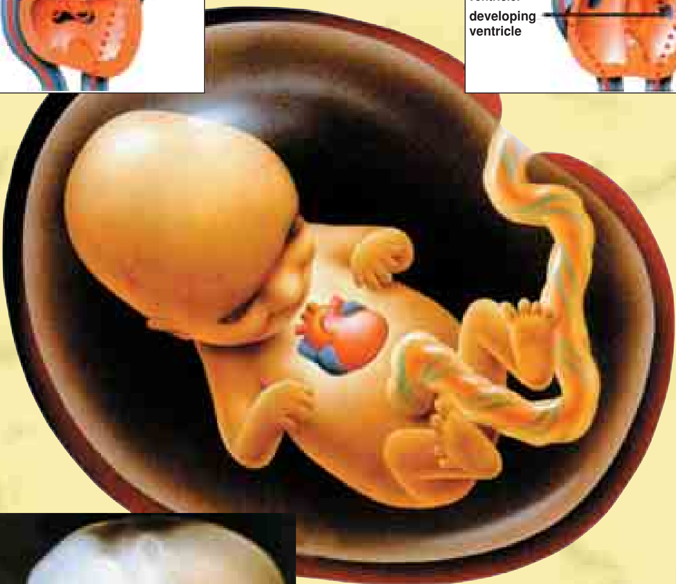














THE FORMATION OF THE HEART

The formation of the heart is an obvious wonder of creation. Suddenly, some multiplying cells begin to contract and expand. Later, hundreds of thousands of these cells come together to form the heart. This heart will continue to beat for a lifetime. On the 23rd day after fertilisation, the blood vessels of the embryo begin to coalesce; on the 25th day, only one chamber can be seen. On the 26th and 27th days the other chambers begin to develop. On the 33rd day the ventricles and the atria begin to develop and on the 40th day the heart is fully formed. In the picture of the embryo to the left, the heart is shown in red.

placenta, and returning wastes to the placenta, so swiftly that a round trip is completed in about thirty seconds.[36] In this way, the blood begins to take the required oxygen and nutrients from the placenta and carry them to the cells. At the moment the kidneys are formed, the blood begins to be purified by taking waste gathered from baby's cells to the kidneys.

Let us pause here to consider: Is it possible that such a perfect system could one day come into being by chance, perfectly and by itself? Is it possible that the special quality of a baby's blood, the blood vessels that carry the blood to the heart and from the heart to the appropriate areas, and the elements that bind the blood cells to the placenta came about in the course of time by chance? Is it possible that all these elements in the system constructed themselves?

It is surely not. This system, of the utmost importance for human beings, must come into being perfectly and in one moment, because any problem with the formation of the blood or the blood vessels will cause the development of the embryo to cease. If the heart pumped the blood before the formation of the blood vessels, the blood would flow uncontrolled and there would be no circulation. Or, if the heart did not begin to beat at the right time, blood would not circulate through the body. This means that the embryo would die without developing in the mother's womb. However, in every one of the millions of people who have lived throughout the ages until today, there has been no problem with these operations; the heart makes its first beat at exactly the right time and pumps just enough blood to the developing body. This makes the question we posed earlier nonsensical: "Could it have happened by chance?" The fact that a system, a living being or an organism comes into being in a moment is clear proof that it has been created. This is a plain truth that every intelligent person will affirm.

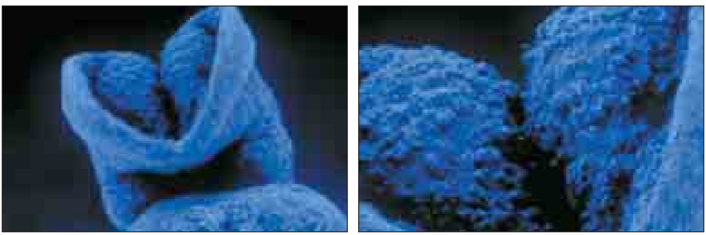
The Creator of all these perfect systems is God, Who created man together with everything he needs and gave him the best of forms.

The Construction of the Nervous System

As all these operations continue, one more important formation must take place: the central nervous system. The central nervous system (the brain and the spinal cord) arises from an elongate thickening of the ectoderm, the outermost of the three primary germ layers of the embryo. The sides of this neural plate elevate as neural folds, which, by growing further, meet and fuse, thereby creating a neural tube. The anterior part of this tube thickens and expands to form the brain; in the meantime, the posterior part forms the spinal cord.

All the developments we have summarized here in one or two sentences surpass the limits of human imagination. The other stages in the formation of the nervous system again and again confirm the extraordinary character of these developments.

From the fifth week there begins to be produced in the spinal column special nerve cells called neurons. They are produced very quickly at the rate of 5000 per second.[37] A large number of brain cells are produced in the first five months of the embryo's life, and all of them will have taken their place in the brain before birth. Cells of the nervous system form very quickly and then begin to migrate to more distant areas in order to form the columns of the central nervous system.



The construction of the brain appears clearly in the watery environment of the mother's womb. This construction is accomplished by cells which have no intelligence or awareness. At the end of this wondrous process the baby will have a total of 10 billion brain cells. Every cell acts with prior knowledge of what cells it must connect with. From among endless possibilities, it finds the place where it belongs. It unites with the cell that it must unite with. In the end, it will have made 100 trillion perfect connections in the brain. That will which allows unconscious cells, working in the dark, to construct the world's most excellent computer—the brain—is the eternal knowledge of God.

But, at this stage, it is absolutely necessary for every neuron to find the place in the nervous system reserved for it. For this reason, a guide is indispensable in order for the young neurons to find their way. These guides are special cells which stretch out as a kind of cable between the places where the brain and spinal cord develop. The neurons leave the place where they were produced and migrate attached to these guides. They recognize the place allotted to them, lodge there and immediately send out extensions establishing connections with other neurons.

This is all very well. But how do the neurons know to set out on such a long journey as soon as they are formed? How do they decide to use a guide to reach their target and to cooperate with one another? What we call neurons are cells, too small to be seen with the naked eye, and are composed of atoms and molecules. No doubt they cannot deploy in such a conscious way by their own decision or will. What directs this activity is not the brain, because the brain of the embryo in the mother's womb has not yet developed.

As soon as these cells are formed, they move as if programmed, directed by information infused into them, to a place they do not know. It is clear that in the process of the formation of the brain and the nervous system, no occurrence can come about by chance, because a variation in one single stage would cause a chain reaction making the whole system go wrong. The formation of neurons and their becoming a system of nerves is only one stage in the formation of the brain and the nervous system attached to it. Let alone the brain, as the evolutionists claim, not even one neuron can be formed by coincidence.

There are many more details of this development. For example, when they first come to be, the neurons have a different structure from those of a mature human being. In order to perform the functions required by the nervous system of a developing human being, the neurons migrate to a particular part of the body, and in the first stage, their metabolism enables them to survive without oxygen. However, when they arrive at the brain area and establish themselves there, they immediately acquire a metabolism that depends on oxygen for its survival. For the be-

nefit of all the nerve cells this transformation must take place perfectly every time, otherwise their survival would not be possible. This is no doubt a miraculous thing.[38]

We know today that it is highly dangerous for human brain cells to remain without oxygen for a certain period, and if that period be prolonged, first paralysis, then death are inevitable. But the neurons which first come into being have a totally different system. If there is a problem at this stage only, that is, if there is no change in the metabolism of the neurons at exactly the right moment, the embryo will not develop into a human being. Of course, it is not possible for a cell to determine what function it will perform in the future and to change its structure by its own will and conscious awareness in order to perform this function.

This being the case, we are confronted by a clear truth: it is God Who creates the neurons with these characteristics, puts them to work at the right moment and places them where they must go. Every human being should know that he has been brought through these stages, and give thanks when he sees the magnificence with which God has created him as a human being. He must not for one moment forget that God is the Creator of everything, and that apart from Him, there is no other power on heaven or on earth.

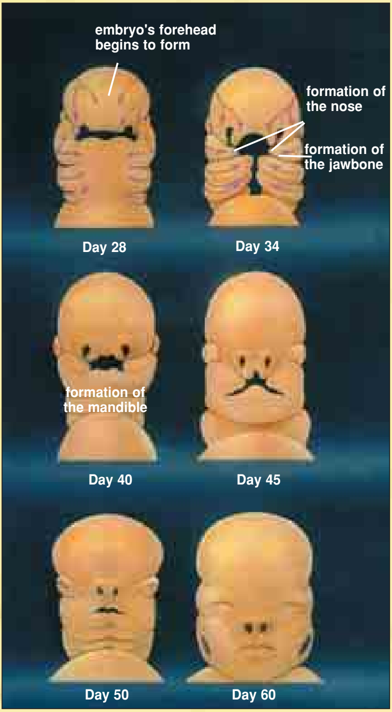
> **... Do you then disbelieve in Him Who created you from dust, then from a drop of sperm, and then formed you as a man? He is, however, God, my Lord, and I will not associate anyone with my Lord. (Qur'an, 18: 37-38)**

O man! What has deluded you in respect of your Noble Lord Who created you and gave you an upright form and proportioned you? In whatever shape He willed, has He moulded you. (Qur'an, 82: 6-8)

The Importance of "Planning" Among the Cells

When we look at the development of the embryo, we see that it shows a high degree of

It is God Who Creates the Body From a Piece of Flesh







Before it begins to develop, the embryo resembles a mass of flesh. The eyes, ears, heart and other organs develop and a brand new person comes into being. Above we can see the series of developments that occur in the formation of the human face. Every human being on the face of the earth has undergone these stages. As a collection of cells unaware of its own existence, a human being continues through this development in a protected and secure environment prepared in the mother's womb. The symmetrical eyes, the eyebrows, nose, mouth, and the protective skin are all formed in the mother's body. These wondrous transformations seen in the picture above are a proof of the creative art of God. It is the duty of every person in the world to consider this truth and give thanks to God.



proportion and harmony. At the end of the first month, fully developed eyes, ears, nose, chin and cheeks become visible.



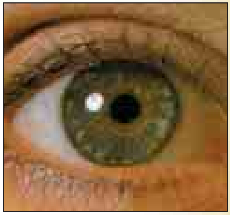
In the course of this harmonious development it is very important that growth and structural change are ensured. It is necessary that these changes occur in the same way for all parts of the body, because all the organs of the human body have a highly complex structure. For example, the eye alone has 40 different parts. In order for the eye to be able to perform its function, it is necessary that the growth of these parts be proportionate, the connections between the parts be sound and that every part be in its own place. Otherwise, the eye could not perform its function. In the same way, in the formation of the arm, the bones and muscles must begin their formation at the same time.

As can be understood from this, all the cells of the embryo act in harmony. Every one of them is aware of the general plan of the body. Every one of them sends a number of messages and reacts to messages coming from other cells. All the cells in the embryo act together; with real understanding, each one different from the other, they use what is required in the information contained in the DNA as needed.

But how do the cells know where to go and what to do? How can they act in such harmony together with other cells? Who decides how to use the genetic material contained in the cells and how will the cells differentiate between one and another?

In the organs of our bodies there must be no deficiency or excess. A deficiency in an organ is sometimes fatal; at least it causes some disability. An excess places an unnecessary burden on the body. In that case, first it is necessary to determine the number of organs that the body needs. How

THE MARVELLOUS CREATION OF THE EYE

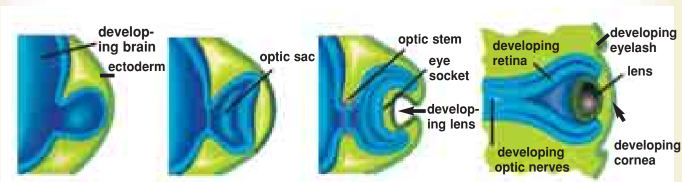


In the fourth week, two cavities are formed on either side of the embryo's head. It is hard to believe, but the eyes will be formed in these cavities beginning in the sixth week. For months the cells work according to an incredible plan, forming the various parts of the eye one by one. Some cells make the cornea, some make the pupil and others make the lens. When a part that a particular cell constructs is completed, the cell ceases to work. Each cell makes a different part of the eye; afterwards, they unite with one another in a marvellous way. There is no error in the process; nothing else takes the place of the pupil, and the cornea, eye muscles, and every other element is in place. These operations continue and the eye is perfectly formed with its various layers.

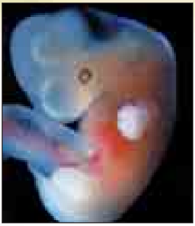
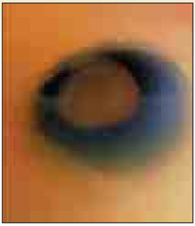
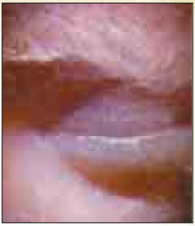
Here we must ask ourselves a few questions: How do these cells know that they must construct different layers? How do they decide where to begin and end the construction of each layer? To these questions there is only one answer: The cells are able to perform this conscious activity because they move under the inspiration of God. But evolutionists who try to explain the formation of a human being by the operations of chance cannot give an answer to these questions.

One evolutionist who explained the perfect plan in the human body was Hoimar von Ditfurth. In his book, *Im Anfang War Der Wasserstoff* (In the Beginning was Hydrogen), he explained the formation of a human being in detail, but he confessed that the theory of evolution could never give an answer to the questions "how" or "why":

> If there is no plan to determine where and when the construction will begin and in what sequence each of its components will be put into operation, that plan will be useless, even if it is excellent in other respects. We know that we must start constructing this building from the foundation up and after we fin-



The formation of the eye in the embryo is briefly as above. A projecting part develops from the forebrain. There form inward evaginations where this hollow reaches the outermost layer of the embryo (ectoderm). From these evaginations, called optic vesicles, will emerge the eyes.

The will that transforms a dark point-like object into coloured, pleasing eyes that can register three dimensions is God, the Possessor of everything.

ish the walls we put on the roof. But before the electrical and water installations are completed, we cannot go on to the plastering. Along with a blueprint that is followed exactly in every construction, there is also a right time to do it.

This is also valid for natural constructions and especially for cells. But we know almost nothing about how this "before and after" relationship occurs in the organization of a cell. Biologists have not yet been able to find out who tells a cell what part of the plan it has to put into effect and when. Who gives the command that hinders the operation of some genes at just the right time, how an embargo on some genes is removed, and who sets suppressor-genes and enhancer genes into action? These are questions about which we are completely in the dark.[1]

In the formation of the eye, "the world's finest camera", we have seen that unconscious cells act with the utmost awareness, creating the eye in the mother's body from nothing. Certainly, it is not the cells themselves that succeed in doing this extraordinary thing: they act under the inspiration of the Almighty God. In the Qur'an, God reveals that He gives human beings their form:

He is God—the Creator, the Maker, the Giver of Form. To Him belong the Most Beautiful Names. Everything in the heavens and earth glorifies Him. He is the Almighty, the All-Wise. (Qur'an, 59: 24)




1- Hoimar von Ditfurth, *Im Anfang War Der Wasserstoff* (In the Beginning was Hydrogen), pp. 129-130

The Wrapping of Muscles Over the Bones

Until very recently, embryologists assumed that the bones and muscles in an embryo developed at the same time. Yet, recent research has revealed a very different fact which had gone unrecognised by man. First, the cartilage tissue of the embryo ossifies. Then muscular cells that are selected from amongst the tissue around the bones come together and wrap around the bones.

This fact, which has recently been discovered by science, was related to man in the Qur'an 1,400 years ago:

> **Then We formed the drop into an alaq (embryo) and formed alaq into a lump and formed the lump into bones and clothed the bones in flesh thus bringing forth another creature. Blessed be God, the Best of Creators! (Qur'an, 23: 14)**

This event, of which the Qur'an informed us 1,400 years ago, is thus described in a scientific publication titled *Developing Human*:

> The shape of the skeleton determines the general appearance of the embryo in the bones stage during the 7th week; muscles do not develop at the same time but their development follows around the bones throughout the body and therefore clothe the bones. Thus the muscles take their well known forms and structures.[1]

In short, man's developmental stages as described in the Qur'an are in perfect harmony with the findings of modern embryology. God, the Lord of all the worlds, had given this information to man centuries ago.

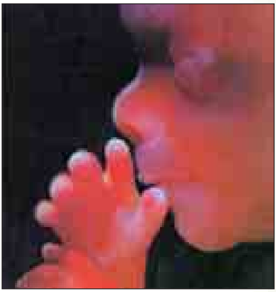
1- Keith L. Moore, *The Developing Human*, W.B. Saunders Company, PA, 1982, p. 364a











In the sixth week the arms and legs of the embryo appear. The chain of wonders in the development of the embryo continues unceasingly as the cells construct the hands. But some of these cells later make an incredible decision and thousands of cells kill themselves one by one. The cells die in a distinct line forming a mould for the development of the fingers. Other cells eat the dead cells and form cavities in these areas. These cavities are the spaces between the fingers. And so the fingers are formed. The fact that cells kill themselves for the sake of human beings is by itself a clear proof that God created human beings. In the meantime, some cells begin to form the legs. These cells do not know that the embryo will need to walk in the outside world, but they construct for it legs and feet with the best possible structure. The source of the conscious activity of the cells is the inspiration of God.

is this number determined? How is it that when a group of cells begins to make an organ, another group of cells is not making a second, exactly similar organ?

Evolutionists try to avoid this issue by saying that the DNA molecule is responsible for all these functions, but this is only a deception. The basic point to consider here is this: who placed all the information in the DNA molecule of every cell of the body? Moreover, who decided where, when and how this information is to be used? To these questions the evolutionists can give no answer.

Cells formed from unconscious and lifeless atoms, blood vessels, tissues, air, wind, or any other material thing, have no power to make such a decision. It is God Who imprinted this marvellous plan in the DNA and it is God Who ensures the perfect realization of this plan by inspiring the cells to do what they must. God has power over all things.

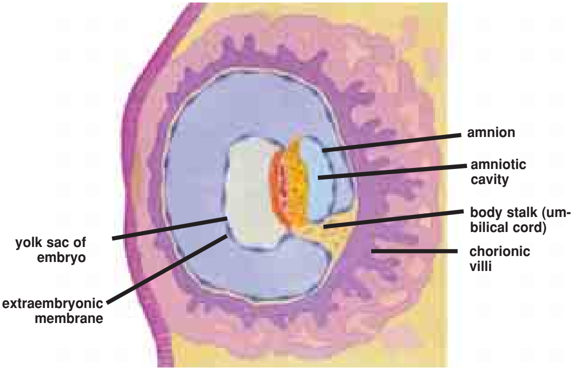
Preparations for the World Outside

The baby, whose organs are slowly developing and who is beginning to move, awaits a further development. In order for the baby to survive in an environment totally different from the secure one in which it now lives, it is necessary that the required arrangements be made.

To this end, the baby needs to start moving slowly and put its newly formed organs into operation. This problem has been solved in the most



At the right, the foetus can be seen in the amniotic membrane. The fluid inside the membrane protects the foetus from shocks and trauma. In addition, the amniotic fluid also prepares the intestines of the foetus for their absorptive function, assists the functioning of the kidneys and ensures the constant temperature needed by the foetus. The presence of amniotic fluid is also important for the health of the mother. Because of this fluid, the foetus is prevented from exerting pressure on the uterus.



The greatest factor in the preparation of the baby for the outside world is without doubt amniotic fluid.

wonderful way. In the membrane separating the baby from the uterus, a special fluid called "amniotic fluid" begins to be produced. The baby's kidneys and lungs, the amniotic membrane and the surrounding uterus contribute to the formation of this fluid.[39]

The Baby's "Water of Life": Amniotic Fluid

Amniotic fluid is specially produced for the baby; it ensures that the organs are prepared to function after birth. The baby, as it were, practises with the amniotic fluid to become accustomed to the outside world by regularly ingesting it. In this way, its tongue begins to perceive bitter, sweet, salty and sour tastes. Afterward, the saliva glands begin to function. The amniotic fluid ingested by the foetus begins to prepare the intestines for their absorptive function, and it makes the kidneys function by creating the necessity for the constant filtration of this same fluid from the blood. The fluid absorbed from the kidneys is transmitted back again to the amniotic fluid, without contaminating it, because the kidneys have the ability, distinct from their later function, to filter and sterilize the fluid ingested by the baby. And this fluid, as when you clean a swimming pool, is



Without amniotic fluid it is not possible for a baby to develop in the mother's uterus. This fluid has been produced flawlessly from the time of the first human being until today. This invalidates the claim of the evolutionists that this development occurred by changes which happened stage by stage over a period of time.

continually purified with the help of a few other fluids.

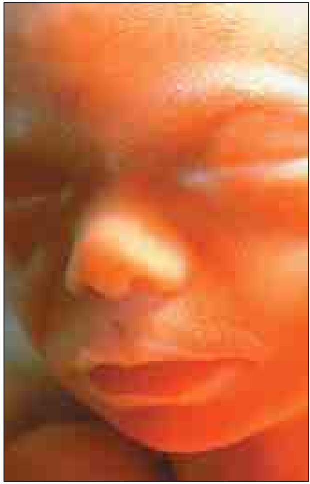
In the same period along with these developments, digestive fluids begin to be secreted in the stomach in order that the digestive system may be fully prepared.[40] And the cells in the baby's newly formed intestines acquire the ability to distinguish between sugars and salts and later to return particular waste products to the mother's blood. In this way, both the intestines and the kidneys are put into action. The amniotic fluid is ingested by the intestines of the foetus once every three hours, that is, eight times a day and is returned to the mother via the blood. As much fluid as is ingested is released to the pool of amniotic fluid both from the mother's womb and from the lungs and kidneys of the foetus where it is produced. In this way, the amount of this fluid, so vitally important for the foetus, remains constant. Because of this perfect system, the digestive system of the foetus is put into operation without any harm to the foetus.

Synchronized with the growth of the foetus, the amount of amniotic fluid increases, reaching about 30 ml at ten weeks, 350 ml at five months, and 1 litre by the seventh month. At the moment of birth however, the amount of fluid falls to half a litre.[41]

The amniotic fluid not only prepares the digestive system for the post-birth period, but also ensures that the baby may move more comfortably in the mother's womb. The foetus floats in this fluid like a rowboat tied up in a harbour. In this state it can move very securely in the mother's womb. At the same time, this fluid protects the foetus from any physical trauma from outside. Pressure applied on the fluid from any direction is dispersed equally in every direction protecting the foetus from any harm-

SPECIAL TINY HAIRS PROTECTING THE BABY

The baby developing in the mother's womb is protected by the amniotic fluid. But if the baby spends too much time in this fluid, it will suffer damage. But this does not happen. The baby's body has an excellent defence against damage by this fluid. In the fifth month, tiny colourless hairs cover the baby's body. These hairs remain on the baby's body for three or four months. Before birth they cover the baby's body almost completely. Because of these hairs, the amniotic fluid will not be able to damage the baby's skin. It it clear that the presence of these hairs is a special precaution taken to protect the baby. In the development of the baby in the mother's womb there is no deficiency in any detail. This system is organized so that no problems will occur and it is only one of the manifestations of the limitless creative power of God.



ful effects. For example, if the mother runs, the jolts produced have no effect on the baby; it is like a cork shaken in a container filled with water. The most perfect protective system possible has been created for the foetus; every kind of danger has been foreseen and precautions taken.

The presence of amniotic fluid is also important for the health of the mother. This fluid fills the whole womb, so as the foetus grows and gains weight, no pressure is exerted on the womb itself. If this fluid were not present, the growing foetus would weigh the uterus down and the counter-pressure exerted by the uterine walls would make the normal development of the foetus impossible.

This special fluid provides another vital necessity for the foetus: a constant temperature. It is known that fluids distribute heat evenly. The amniotic fluid is recycled continually and has a constant temperature. The heat needed for the development of the foetus is distributed equally in every direction.

If there is a single problem with the production of this fluid, with its continuous purification or the adjustment of its volume, the natural development of the foetus is impaired. For example, if the amount of amniotic

fluid is less than required, or if it is not present at all, a series of abnormalities begins to appear. Limbs wither and become deformed, joints fuse, skin loosens and, because of pressure, the face is deformed. The most serious problem is that the development of the lungs is impeded and the baby dies immediately after birth.[42]

All this shows us that from the first human being until now, the production of amniotic fluid has continued flawlessly. Without it, a baby could not develop in its mother's womb. This fact completely discredits the evolutionists' claim that development occurs stage by stage over a period of time. If one single stage in the creation of a new human being did not occur, for example, as we said just now, if the production of amniotic fluid were deficient, birth could never take place and the human race would never have come into existence. Therefore, it cannot be claimed that amniotic fluid began to be produced over a period of time when the need for it arose. This fluid must exist along with the baby. It is impossible to claim that such a fluid, which has such important functions, was formed in a moment by chance. To say that a complex organism came to exist in a moment is to say that this organism was created. It is impossible for chance actions to calculate, determine needs, to select the things appropriate for these needs and apply them at the right time and in the right place.

It is clear that God creates the amniotic fluid and the systems to which it is connected. He too determines the amount of amniotic fluid required.

God knows what every female bears and every shrinking of the womb and every swelling. Everything has its measure with Him. (Qur'an, 13: 8)

Preparations for the First Breath

After birth the most important thing for the baby is to breathe; it is necessary that the lungs, which had never known air before, fill with it and start to breathe. The baby, who had previously received oxygen from the mother's blood, must now take it from the air with his own lungs. And in a miraculous way, the lungs, when had never taken a breath before the first moment of birth, begin to breathe quite normally.

At the moment the baby is born, God creates everything in readiness and ensures that the preparation of the lungs has been completed as required. For the preparation of the lungs, the diaphragm comes into play; it is located between the stomach and the rib cage. The diaphragm begins to function towards the sixth month of pregnancy. At first it expands and contracts intermittently several times an hour, but after birth it will do this continuously.

It can be seen from this that the baby is constantly under special protection, but it must be remembered that this is not the mother's protection. As the foetus develops, the mother carries on her normal life; none of the changes in her body are under her control. Even if she wanted to intervene, she could not. All these developments occur by the eternal power of our Lord. God has created all the things required for a child to come into the world as a normal human being in the most wonderful way. All the needs of the baby while it is in the foetus stage are met, and the mother is spared the necessity of thinking about what she must do to bring the baby into the world and ensure that the baby will survive.

Even if she thought about doing something to this end, there is nothing she could do. For example, taking waste material from the body of the foetus into her own kidneys, purifying it and discharging it are things



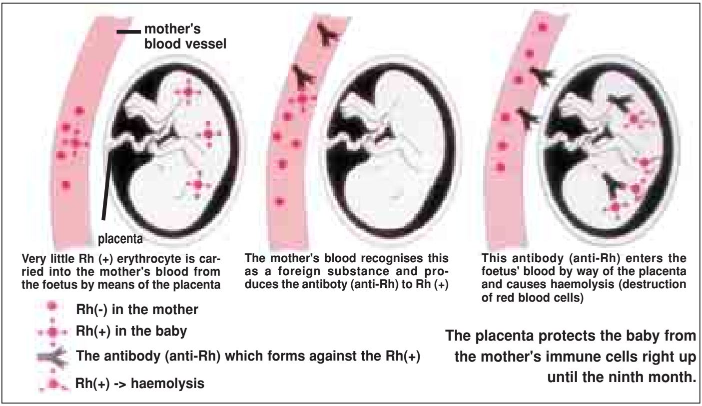
It is possible with today's technology to observe the development of the baby in the mother's womb with ultrasound.

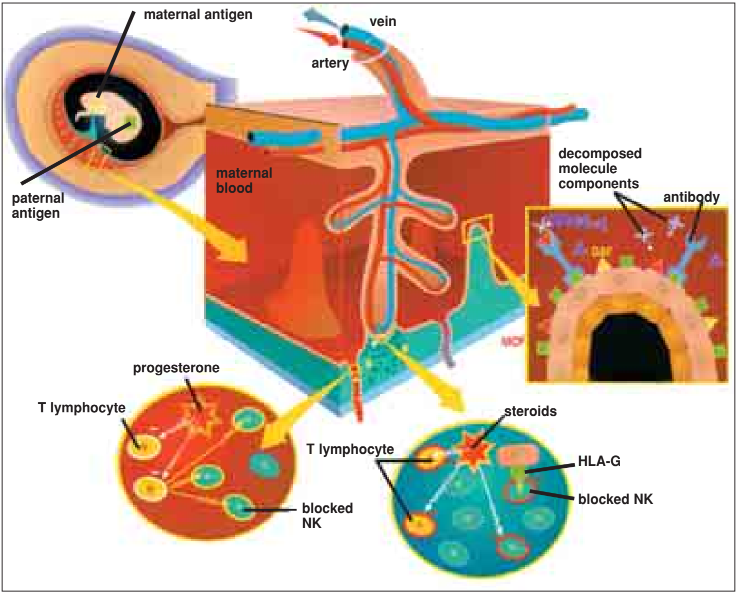
which no mother could do on her own. It is God Who determines all the needs for a new human being to come into the world and constructs the system in the way that will best respond to these needs.

The Preparations Are Completed

As the foetus gradually gets prepared for life in the outside world, an extraordinary team of workers is organized among the organs. The work that will be done is determined according to the conditions in the outside world. The eyes, unused in the mother's womb, are constructed for the intensity of the world's light; the ears are made for the world's sounds. In the same way, the stomach and the other digestive organs are equipped with a physiological system designed to function in relation to this world's nutrient material. The cells of the digestive system are programmed and adjusted so as to digest food they have never encountered. Along with their ability to analyse carbohydrates and fats, they are programmed to know which nutrients are required by which organs and to ensure that these nutrients are sent to the relevant cells in the body. So, the foetus is prepared for the outside world in a planned and programmed way. Here we must point out again that these organs and cells that constitute the body of a new human being make these preparations for an environment that they have never seen, heard of or otherwise experienced. They develop as if they were aware of the environment that was waiting for them after leaving the mother's body. Certainly it is impossible to claim that these cells accomplish these acts by their own prescience. The conscious and deliberate preparations made by the cells in forming a baby's body, inspired in them by God, must be considered as an important proof of creation.

In the final months, the foetus begins to gain weight. Certain cells produce a fat layer which is named "brown fat" because it has a brownish colour. The special brown fat develops in particular areas of the foetus such as the nape of the neck, around the kidneys and behind breastbone. In addition to providing insulation, brown fat itself produces heat. The





One of the functions of the placenta is to protect the baby from the mother's defensive cells (top). But this protection continues only up to a certain month. In the ninth month, this situation changes and the antibodies in the mother's body pass with the help of the placenta into the foetus (large picture). For the first six months of life in the world, the baby's immune cells will not be formed. This would mean death for the baby. Therefore, it is very important that the placenta gives permission for the antibodies to pass. It is clear to everyone that the cells comprising the placenta are by themselves incapable of such conscious behaviour. It is God Who creates these cells and inspires them as to what they must do.

special function of this fat layer is to keep the baby warm in the early weeks after birth.[43] The fact that these cells which produce this fat layer flawlessly perform the duties that have been inspired in them is another proof of creation.

In the meantime, the skin of the foetus undergoes important changes resulting in the development before birth of skin surface which is critical for survival after birth. The skin of the foetus produces an oily surface covering which confers a water repelling property to the surface of the skin in contact with the amniotic fluid. This oily surface layer has an important effect to promote maturation of the underlying skin cells and the formation of a skin barrier before birth.[44]

In earlier sections, we mentioned that in the early stages of the embryo, the mother's defensive cells are not permitted access to the baby's blood. These cells see the baby as a foreign intrusion and could kill it. But in the ninth month, this situation changes suddenly and antibodies (a protective protein produced by the immune system) in the mother's womb pass to the foetus through the placenta. When we examine the reason for this, we are struck by something very surprising. In the first six months after birth, the cells in the baby's immune system do not develop, but the baby will need antibodies to protect it from the germs in the world. So, in the last month, the mother's antibodies, which are permitted access to the baby's blood, will be ready to protect the baby from contracting infectious diseases when it is first born.[45] In the subsequent months, as the baby's immune system begins to produce its own antibodies, the mother's antibodies will cease functioning.

As in what we have said before, this operation too, as outlined above, is an example of the perfect plan in the creation of human beings. The details in every month, every day, every minute of the formation of a human being are minutely calculated. Flawless systems prevent harmful material from reaching the foetus, but when these materials are needed, the old system is removed according to the same perfect plan, and a new one is put in place. Certainly, this perfection does not come about by the

deliberate decision and will of the cells which make up a human being. All these things are proof of the incomparable creation of Almighty God.

As can be seen in the examples given, every stage in the development of a human being is controlled and occurs according to a perfectly ordered plan. And every human being, while in the foetus stage, undergoes this controlled development and grows into maturity. The special plan and perfect design in the development of a human being is a manifestation for aware individuals of the eternal knowledge and wisdom of God.



CREATION FROM A DROP

During the nine months in the mother's womb, growth continues perfectly. The foetus first enters the womb as a drop of fluid and gradually turns into a human being.

If there were the slightest lack of coordination in this development, the foetus would surely die. For example, if the brain grew more quickly than the bones of the skull, the brain of the foetus would be compressed and suffer damage. This coordination is also important for the formation of the eyes, the liver and heart, as well as other organs and the bones which surround them. The ordered development of the organs is also very important because, if the kidneys were slow to develop and the circulatory system had already formed, the blood would not be purified and the body would be poisoned.

But this does not happen and the baby about to open his eyes to the world is created by passing perfectly from one stage to another.

The only power that creates a complete human being from what was at first just a drop of fluid is that of Almighty God, the Lord of the universe.

The Qur'an tells how God created human beings:

Does man reckon he will be left to go on unchecked?
Was he not a drop of ejaculated sperm,
then an alaq (embryo) which He created and shaped,



God brought you out of your mothers' wombs knowing nothing at all, and gave you hearing, sight and hearts so that perhaps you would give thanks.
(Qur'an, 16: 78)

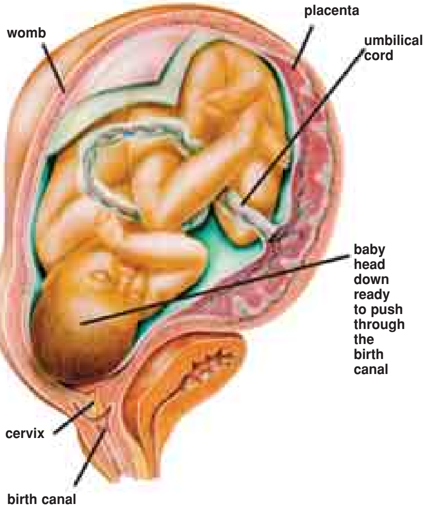
making from it both sexes, male and female?

Is He Who does this not able to bring the dead to life?

(Qur'an, 75: 36-40)

Certainly, an individual confronted by this truth will always be thankful to his Lord for creating him from a drop of fluid and making him a seeing, hearing and thinking person.

Say: "It is He Who brought you into being and gave you hearing, sight and hearts. What little thanks you show!" (Qur'an, 67: 23)



The fertilised egg needs a secure place in the mother's body in order to survive and continue to develop. Cells should find a place where they will be protected and be nourished, and where birth will occur easily in nine months. The mother's uterus perfectly meets these requirements. The baby lodges in the uterus for nine months. At the end of the ninth month, necessary processes take place in order to enable the realization of birth. Checkups are done and the baby gets ready to step into the outer world.

When all the preparations are complete for the foetus to enter a new world, the amniotic fluid begins to perform new activities. The amniotic fluid forms fluid vesicles which will cause the entrance of the womb to expand to a size that will allow the baby to pass, and prevent the baby from being compressed in the womb during the birth process. When the birth begins, the vesicles are perforated and pour out the fluid they contain, lubricating and sterilizing the channel through which the foetus will pass. In this way the birth is easier and protected from bacteria.[46]

Along with these preparations made in the womb, a few other conditions must be met at the same time in order to have a safe birth. For example, for the baby to emerge from the womb, it must be in the right position. To achieve this, the baby's feet move, causing it to turn slowly until its head moves into the cervix. Now that the baby is too big to manoeuvre, the baby's ability to move is curtailed, and it cannot move its head out of that position.[47] But how does the unborn baby make the decision as to which position is appropriate? How does it know the best position for the birth?

And, how does the foetus in its mother's womb determine when it is time to be born? Certainly, these are very important things to think about. The fact that a being whose consciousness is still undeveloped can demonstrate such conscious behaviour is a clear indication not of its own will, but of the knowledge and inspiration of God the Creator.

In the stage at which the body comes into the world, there are many other examples of marvellous design to be seen. For example, in order for a healthy birth to occur, the baby's skull must have a structure that will not be damaged in the birth canal. If we look at the baby's skull, we see a group of 5 bones with a soft spot called the "fontanelle" between them. This soft structure gives to the skull a flexibility that prevents damage to the baby's brain and skull from the pressure that occurs during birth.

Before the birth of the baby, preparations are made under very strict controls; precautions are taken with a view to every eventuality. For example, amniotic fluid comes into play to facilitate the birth and prevent infection.

All these bring a question to mind: Who ensures that all these preparations have been completed, and determines that the time has come? Who checks that the eyes are ready to see, the lungs are ready to breathe, the joints are perfectly developed and the brain is completely formed?

In the developing body of the foetus, there is no such mechanism to



The system designed in the mother's body for the development of the baby functions perfectly. If a baby is born without these developments being completed, for whatever reason, it will need special care (left).

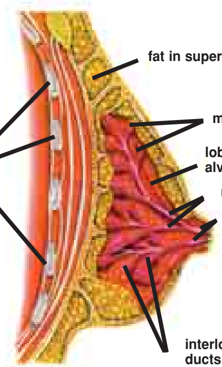
control these things. The brain, which is accepted as the control centre for the whole body, is an organ that develops along with the foetus. Besides, even a perfectly formed brain could not discern any meaning at this stage. The foetus, which until that moment had developed in its mother's womb, is completely unaware of an external environment. It cannot determine whether or not it is in a condition suitable for an environment it has never seen. And it is not the mother who determines the time of birth. From the very first day, a mother cannot intervene in one single stage of the operations occurring in her body; how, then, could she decide when these stages have reached their completion?

There is no doubt that it is God Who controls every stage of the baby's development and determines when a human being will begin his life in this world. It is only God, Who created human beings, Who knows every moment of the lives they will lead. When a human being comes into the world, God even knows the day he will die. Death will come at the time God determined. An intelligent person who has an awareness of these facts knows what he must do: He must think about his own creation and once again bear witness to the eternal power of his Lord, and he must order his whole life in a way that will be pleasing to God.

> **Mankind! If you are in any doubt about the Resurrection, know that We created you from dust, then from a drop of sperm, then from an alaq, then from a lump of flesh, formed yet unformed, so that We might manifest to you Our power. We make whatever We want stay in the womb until a specified time and then We bring you forth as children, so that you may reach your full maturity. Some die young and some are returned to the most decrepit (old) age when all that they once knew they know no more. (Qur'an, 22: 5)**

The First Food of This World: MOTHER'S MILK

From the moment a baby opens its eyes to this world, its body must adapt to a new life. Every factor to facilitate this adaptation has been put into effect during and after the pregnancy. The clearest example of this is



Every detail in the mother's body is designed to meet the needs of the baby. For example, mother's milk begins to be secreted with the birth of the baby. But during the pregnancy all necessary preparations are made under the supervision of various hormones for the production of milk. In the milk, every material that the baby will need is contained. When we think about its general qualities, we see clearly that nothing can take the place of mother's milk.

the stage of the formation of mother's milk.

The formation of the milk is provided by the mother's hormones. The production of milk is connected basically to a hormone called "prolactin" produced by the anterior pituitary gland in the brain. During pregnancy, the progesterone and the oestrogen hormones produced by the placenta prevent prolactin from being activated and producing milk. But the placenta is discharged after birth causing the level of progesterone and oestrogen in the blood to fall; after this, prolactin comes into action and contributes to the formation of milk. Because of this communication among the hormones, such a valuable nutrient as mother's milk is prepared exactly at the moment when the baby needs it. This is indeed a momentous exchange of information. While the placenta is in the body, it performs vital tasks but at the right time it must be ejected. This brings with it a very important development for human life. As we have seen, in the stages of human creation all the things that take place complement one another. Certainly, these are clear proofs that every human being has been constructed by a supreme power.

And these stages continue after the baby has come into the world. The production of milk by the mother increases according to the baby's need for nourishment. In the first days, up to 50 g. is produced; in the sixth month,

the production may be as high as one litre. Those scientists who have tried to find the formula for mother's milk have been unsuccessful after long investigations because there is no standard type of mother's milk. In every mother's body, milk is produced according to the needs of her own baby, and this milk nourishes the baby in a way that no other extraneous nourishment can. Research has shown that the antibodies, hormones, vitamins and minerals in mother's milk are determined by the needs of the baby.

The Difference Between Mother's Milk and Other Nutrients

The use of nutrient material other than mother's milk does not completely meet the needs of the baby. For example, no other nutrient material contains the antibodies required for the baby's immune system.

Cow's milk is considered to be the classic nutrient material for babies. When we compare it with mother's milk, we can better understand the superiority of the latter. In cow's milk there is a higher amount of casein than in human milk. Casein is a protein found in coagulated (sour) milk. This material breaks down into larger pieces in the stomach making digestion difficult. For this reason, cow's milk is harder to digest than mother's milk. The fact that little of this material is found in mother's milk makes the baby's digestion easier.

These two kinds of milk are also different with regard to the composition of amino acids. Due to this difference in composition, the total number of amino acids present in the plasma of a baby fed with cow's milk is greater; the level of some amino acids is too high while the level of others is too low. This has negative effects on the nervous system and, because of the higher protein content, places an extra burden on the kidneys.

Another factor that makes mother's milk different is its sugar content. In mother's milk and cow's milk there is the same kind of sugar-lactose. But the amount of lactose in human milk (L / 7g) is different from that in cow's milk (L / 4.8g). Besides, the large coagulated particles of cow's milk pass much more slowly through the small intestine. For this re-

ason, high amounts of fluid and lactose, which are very important, are absorbed in the first section of the small intestine. Coagulated particles of mother's milk (unlike those of cow's milk) pass through the small intestine easily, and lactose and fluid reach the large intestine. In this way, a healthy intestinal structure develops. The second advantage of the great quantity of lactose found in human milk is that it ensures the synthesis of a material called "cerebroside", which plays an important role in the construction of the essential structures of the nervous system.

Despite the fact that the fat level in mother's milk and cow's milk is almost the same, the quality of those fats is different. The linoleic acid in mother's milk is the only fatty acid required in the nourishment of the baby.

Another factor that distinguishes mother's milk is the amount and proportion of the salt and minerals it contains. For example, in cow's milk the amount of calcium and phosphorus is high; but the ratio of calcium to phosphorus in cow's milk makes it difficult to digest properly. Phosphorus can combine with calcium in the digestive tract and actually prevent the absorption of calcium. Therefore, if a baby is given cow's milk in the first days of its life, the way can be opened to certain abnormalities due to a drop of the level of calcium in the blood.[48]

Apart from this, human milk is 50% iron. Because cow's milk contains a much lower proportion of this mineral, babies fed on cow's milk can develop anaemia linked to iron deficiency.

Richness in vitamins is another factor that makes mother's milk indispensable for the baby. From the point of view of the vitamins they contain, mother's milk and cow's milk are quite different. Despite the fact that the level of vitamin A is the same, the level of vitamins E, C and K is higher in mother's milk. The amount of vitamin D in mother's milk is sufficient for the baby's needs.

Mother's Milk Protects the Baby at Every Stage

A baby coming into the world from the protected, bacteria-free womb of its mother must fight against several bacteria in the external



...My Lord encompasses all things in His knowledge so will you not pay heed?
(Qur'an, 6: 80)

world. One of the most important features of mother's milk is that it protects the baby from infections. The protective cells (antibodies) that pass from the mother's milk to the baby cause the baby to start fighting against bacteria it had never known before, as if it had actually been informed. The antibodies contained in great quantities in the form of mother's milk called "colostrum", which is secreted in the first few days after birth, perform an especially protective function.

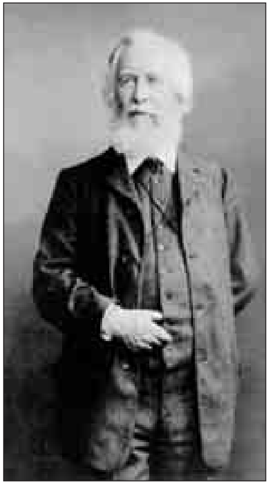
This protection that mother's milk provides for the baby (protection from slight infections to very serious ones), is vitally important for the first few months, and its benefits increase in proportion to the period of breast feeding.

The benefits to the baby of mother's milk become more evident every passing day. One of the things scientists have discovered about mother's milk is that it is highly beneficial for a baby up to two years of age.[49]

The importance of this recent discovery was revealed to us 14 centuries ago:

We have instructed man concerning his parents. Bearing him caused

his mother great debility and the period of his weaning was two years: "Give thanks to Me and to your parents. I am your final destination." (Qur'an, 31: 14)



Evolutionist Haeckel did not hesitate to produce fabricated evidence. But as science advanced, it was revealed that Haeckel's scenario was purely imaginary.

The event of birth is a proof of a supreme creation, yet evolutionists try to make reference to it in defence of their theory. The fact that, in the creation of a new human being, every stage develops according to a very delicate design, is today an undisputed fact in the field of embryology. In this case, how do evolutionists try to interpret this fact of creation in reference to their theory?

At the end of the 19th century, the evolutionist biologist Ernst Haeckel proposed his thesis, "Ontogeny Recapitulates Phylogeny". In this thesis, Haeckel claimed that living embryos in the process of their development repeat the evolutionary process that their supposed ancestors went through. For example, he proposed that a human embryo in its mother's womb first displayed the characteristics of a fish, then of a reptile before finally turning into a human being.

Before long it was realized that this thesis did not reflect the facts. The gills that supposedly appeared in the first periods of a human embryo were actually the human inner ear canal and the parathyroid and thymus glands; the part of the embryo resembling an egg yoke was actually the sack responsible for the production of the baby's blood; the part that was thought to be the tail was identified as the human spine.

These are now facts well attested in the world of science. Shortly after Haeckel proposed his theory, evolutionists themselves acknowledged



In Haeckel's fabricated drawings, the embryos of various living things were placed side by side in the attempt to give the impression that there was a similarity among them. In order to show the similarity between the embryo of a human being and that of a fish, Haeckel made a few additions to some parts and removed other parts. As in all other evolutionist falsifications, the goal here was to provide false evidence for evolution. But actual photographs of these embryos clearly revealed Haeckel's falsifications. These fabrications are just one proof that the theory of evolution is a deceit founded on falsehood.

that his claims were false. Two leading neo-Darwinists, George Gaylord Simpson and W. Beck acknowledged the invalidity of this theory:

> Haeckel misstated the evolutionary principle involved. It is now firmly established that ontogeny does not repeat phylogeny.[50]

The validity of Haeckel's theory was also rejected in scientific debate in the 1920's. After this, in the 1950's, the theory was completely removed from text books.[51]

Fabricated Drawings



Have they not reflected that God created the heavens and the earth and everything between them for a worthy end and for a fixed term? Yet many people deny that they will ever meet their Lord.
(Qur'an, 30: 8)

CONCLUSION

In proposing his theory, Haeckel did not act contrary to the tradition of evolutionist scientists; he produced imaginary drawings to illustrate his ideas. Even when embryology developed and it was revealed that the drawings were fabricated, he acknowledged that he had not followed a different path from the rest of his colleagues:

> After this compromising confession of 'forgery' I should be obliged to consider myself condemned and annihilated if I had not the consolation of seeing side by side with me in the prisoner's dock hundreds of fellow-culprits, among them many of the most trusted observers and most esteemed biologists. The great majority of all the diagrams in the best biological textbooks, treatises and journals would incur in the same degree the charge of 'forgery,' for all of them are inexact, and are more or less doctored, schematised and constructed.[52]

It can be understood from this confession that Haeckel's attempts to use embryology as a proof for evolution are completely without foundation and amount to nothing more than sophistry. The details we have given in the course of this book, as general as they were, of the miracle of human creation are an undeniable proof of the truth of creation.

Everyone in the world went into his mother's womb as a simple sperm cell and there, under specially created conditions, united with an egg. After this, he began life as a single cell. You also went through this process along with your mother, father, brothers and sisters, friends and acqu-



What! Are they in doubt about the meeting with their Lord? What! Does He not encompass all things? (Qur'an, 41:54)

THE EVOLUTION MISCONCEPTION

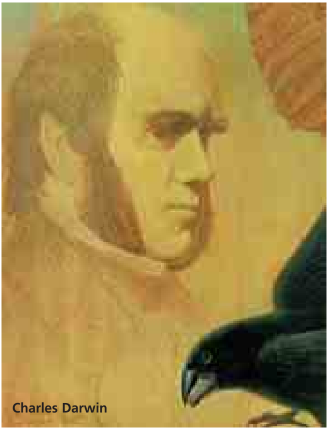
Every detail in this universe points to a superior creation. By contrast, materialism, which seeks to deny the fact of creation in the universe, is nothing but an unscientific fallacy.

Once materialism is invalidated, all other theories based on this philosophy are rendered baseless. Foremost of them is Darwinism, that is, the theory of evolution. This theory, which argues that life originated from inanimate matter through coincidences, has been demolished with the recognition that God created the universe. American astrophysicist Hugh Ross explains this as follows:

> Atheism, Darwinism, and virtually all the "isms" emanating from the eighteenth to the twentieth century philosophies are built upon the assumption, the incorrect assumption, that the universe is infinite. The singularity has brought us face to face with the cause—or causer—beyond/behind/before the universe and all that it contains, including life itself.[53]

It is God Who created the universe and Who designed it down to its smallest detail. Therefore, it is impossible for the theory of evolution, which holds that living things are but products of chance, to be true.

Unsurprisingly, when we look at the theory of evolution, we see that this theory is denounced by scientific findings. The design in life is ex-


Charles Darwin

tremely complex and striking. In the inanimate world, for instance, we can explore how sensitive are the balances which atoms rest upon, and further, in the animate world, we can observe in what complex designs these atoms were brought together, and how extraordinary are the mechanisms and structures such as proteins, enzymes, and cells, which are manufactured with them.

This extraordinary design in life invalidated Darwinism at the end of the 20th century.

We have dealt with this subject in great detail in some of our other studies, and shall continue to do so. However, we think that, considering its importance, it will be helpful to make a short summary here as well.

The Scientific Collapse of Darwinism

Although a doctrine going back as far as ancient Greece, the theory of evolution was advanced extensively in the 19th century. The most important development that made the theory the top topic of the world of science was the book by Charles Darwin titled The Origin of Species published in 1859. In this book, Darwin denied that God created different living species on the earth separately. According to Darwin, all living beings had a common ancestor and they diversified over time through small changes.

Darwin's theory was not based on any concrete scientific finding; as he also accepted, it was just an "assumption." Moreover, as Darwin con-

fessed in the long chapter of his book titled "Difficulties of the Theory," the theory was failing in the face of many critical questions.

Darwin invested all his hopes in new scientific discoveries, which he expected to solve the "Difficulties of the Theory." However, contrary to his expectations, scientific findings expanded the dimensions of these difficulties.

The defeat of Darwinism against science can be reviewed under three basic topics:

1) The theory can by no means explain how life originated on the earth.

2) There is no scientific finding showing that the "evolutionary mechanisms" proposed by the theory have any power to evolve at all.

3) The fossil record proves completely the contrary of the suggestions of the theory of evolution.

In this section, we will examine these three basic points in general outlines:

The First Insurmountable Step: The Origin of Life

The theory of evolution posits that all living species evolved from a single living cell that emerged on the primitive earth 3.8 billion years ago. How a single cell could generate millions of complex living species and, if such an evolution really occurred, why traces of it cannot be observed in the fossil record are some of the questions the theory cannot answer. However, first and foremost, of the first step of the alleged evolutionary process it has to be inquired: How did this "first cell" originate?

Since the theory of evolution denies creation and does not accept any kind of supernatural intervention, it maintains that the "first cell" originated coincidentally within the laws of nature, without any design, plan, or arrangement. According to the theory, inanimate matter must have produced a living cell as a result of coincidences. This, however, is a claim inconsistent with even the most unassailable rules of biology.

"Life Comes from Life"

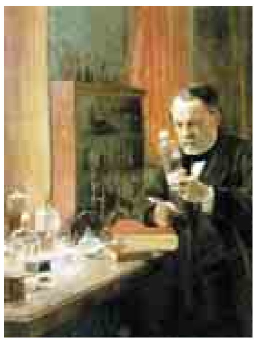
In his book, Darwin never referred to the origin of life. The primitive understanding of science in his time rested on the assumption that living beings had a very simple structure. Since medieval times, spontaneous generation, the theory asserting that non-living materials came together to form living organisms, had been widely accepted. It was commonly believed that insects came into being from food leftovers, and mice from wheat. Interesting experiments were conducted to prove this theory. Some wheat was placed on a dirty piece of cloth, and it was believed that mice would originate from it after a while.

Similarly, worms developing in meat was assumed to be evidence of spontaneous generation. However, only some time later was it understood that worms did not appear on meat spontaneously, but were carried there by flies in the form of larvae, invisible to the naked eye.

Even in the period when Darwin wrote *The Origin of Species*, the belief that bacteria could come into existence from non-living matter was widely accepted in the world of science.

However, five years after the publication of Darwin's book, Louis Pasteur announced his results after long studies and experiments, which disproved spontaneous generation, a cornerstone of Darwin's theory. In his triumphal lecture at the Sorbonne in 1864, Pasteur said, *"Never will the doctrine of spontaneous generation recover from the mortal blow struck by this simple experiment."*[54]

Advocates of the theory of evolution resisted the findings of Pasteur for a long time. However, as the development of science unraveled the complex structure of the cell of a living being, the idea that life



With the experiments he carried out, Louis Pasteur invalidated the claim that "inanimate matter can create life", which constituted the groundwork of the theory of evolution.

could come into being coincidentally faced an even greater impasse.

Inconclusive Efforts in the Twentieth Century

The first evolutionist who took up the subject of the origin of life in the twentieth century was the renowned Russian biologist Alexander Oparin. With various theses he advanced in the 1930's, he tried to prove that the cell of a living being could originate by coincidence. These studies, however, were doomed to failure, and Oparin had to make the following confession: "Unfortunately, however, the problem of the origin of the cell is perhaps the most obscure point in the whole study of the evolution of organisms."[55]



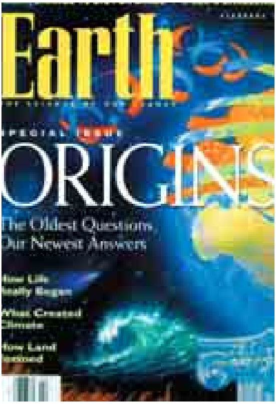
Alexander Oparin's attempts to offer an evolutionist explanation for the origin of life ended in a great fiasco.

Evolutionist followers of Oparin tried to carry out experiments to solve the problem of the origin of life. The best known of these experiments was carried out by American chemist Stanley Miller in 1953. Combining the gases he alleged to have existed in the primordial earth's atmosphere in an experiment set-up, and adding energy to the mixture, Miller synthesized several organic molecules (amino acids) present in the structure of proteins.

Barely a few years had passed before it was revealed that this experiment, which was then presented as an important step in the name of evolution, was invalid, the atmosphere used in the experiment having been very different from real earth conditions.[56]

After a long silence, Miller confessed that the atmosphere medium he used was unrealistic.[57]

All the evolutionist efforts put forth throughout the twentieth cen-



As accepted also by the latest evolutionist theorists, the origin of life is still a great stumbling block for the theory of evolution.

tury to explain the origin of life ended with failure. The geochemist Jeffrey Bada from San Diego Scripps Institute accepts this fact in an article published in *Earth* Magazine in 1998:

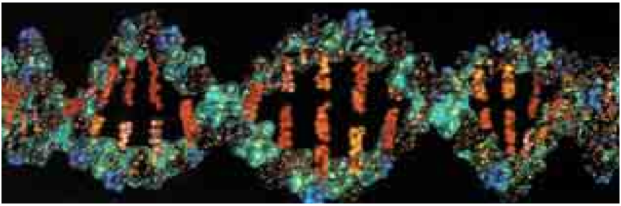
> Today as we leave the twentieth century, we still face the biggest unsolved problem that we had when we entered the twentieth century: How did life originate on Earth?[58]

The Complex Structure of Life

The primary reason why the theory of evolution ended up in such a big impasse about the origin of life is that even the living organisms deemed the simplest have incredibly complex structures. The cell of a living being is more complex than all of the technological products produced by man. Today, even in the most developed laboratories of the world, a living cell cannot be produced by bringing organic chemicals together.

The conditions required for the formation of a cell are too great in quantity to be explained away by coincidences. The probability of proteins, the building blocks of cell, being synthesized coincidentally, is 1 in 10^{950} for an average protein made up of 500 amino acids. In mathematics, a probability smaller than 1 over 10^{50} is practically considered to be impossible.

The DNA molecule, which is located in the nucleus of the cell and which stores genetic information, is an incredible databank. It is calculated that if the information coded in DNA were written down, this would make a giant library consisting of 900 volumes of encyclopaedias of 500 pages each.



One of the facts nullifying the theory of evolution is the incredibly complex structure of life. The DNA molecule located in the nucleus of cells of living beings is an example of this. The DNA is a sort of databank formed of the arrangement of four different molecules in different sequences. This databank contains the codes of all the physical traits of that living being. When the human DNA is put into writing, it is calculated that this would result in an encyclopaedia made up of 900 volumes. Unquestionably, such extraordinary information definitively refutes the concept of coincidence.

A very interesting dilemma emerges at this point: the DNA can only replicate with the help of some specialized proteins (enzymes). However, the synthesis of these enzymes can only be realized by the information coded in DNA. As they both depend on each other, they have to exist at the same time for replication. This brings the scenario that life originated by itself to a deadlock. Prof. Leslie Orgel, an evolutionist of repute from the University of San Diego, California, confesses this fact in the September 1994 issue of the *Scientific American* magazine:

> It is extremely improbable that proteins and nucleic acids, both of which are structurally complex, arose spontaneously in the same place at the same time. Yet it also seems impossible to have one without the other. And so, at first glance, one might have to conclude that life could never, in fact, have originated by chemical means.[59]

No doubt, if it is impossible for life to have originated from natural causes, then it has to be accepted that life was "created" in a supernatural way. This fact explicitly invalidates the theory of evolution, whose main purpose is to deny creation.

Imaginary Mechanisms of Evolution

The second important point that negates Darwin's theory is that both concepts put forward by the theory as "evolutionary mechanisms" were

understood to have, in reality, no evolutionary power.

Darwin based his evolution allegation entirely on the mechanism of "natural selection". The importance he placed on this mechanism was evident in the name of his book: *The Origin of Species, By Means Of Natural Selection…*

Natural selection holds that those living things that are stronger and more suited to the natural conditions of their habitats will survive in the struggle for life. For example, in a deer herd under the threat of attack by wild animals, those that can run faster will survive. Therefore, the deer herd will be comprised of faster and stronger individuals. However, unquestionably, this mechanism will not cause deer to evolve and transform themselves into another living species, for instance, horses.

Therefore, the mechanism of natural selection has no evolutionary power. Darwin was also aware of this fact and had to state this in his book *The Origin of Species*:

> Natural selection can do nothing until favourable individual differences or variations occur.[60]

Lamarck's Impact

So, how could these "favourable variations" occur? Darwin tried to answer this question from the standpoint of the primitive understanding of science in his age. According to the French biologist Lamarck, who lived before Darwin, living creatures passed on the traits they acquired during their lifetime to the next generation and these traits, accumulating from one generation to another, caused new species to be formed. For instance, according to Lamarck, giraffes evolved from antelopes; as they struggled to eat the leaves of high trees, their necks were extended from generation to generation.

Darwin also gave similar examples, and in his book *The Origin of Species*, for instance, said that some bears going into water to find food transformed themselves into whales over time.[61]

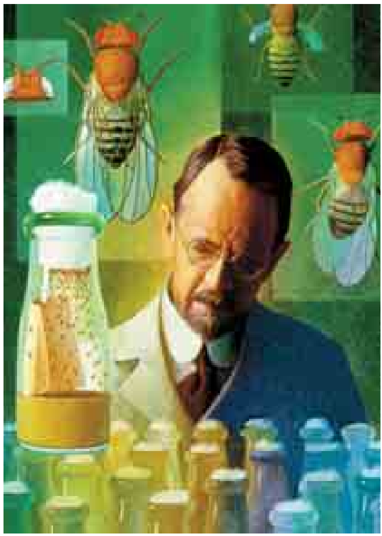
However, the laws of inheritance discovered by Mendel and verified

by the science of genetics that flourished in the 20th century, utterly demolished the legend that acquired traits were passed on to subsequent generations. Thus, natural selection fell out of favour as an evolutionary mechanism.

Neo-Darwinism and Mutations

In order to find a solution, Darwinists advanced the "Modern Synthetic Theory", or as it is more commonly known, Neo-Darwinism, at the end of the 1930's. Neo-Darwinism added mutations, which are distortions formed in the genes of living beings because of external factors such as radiation or replication errors, as the "cause of favourable variations" in addition to natural mutation.

Today, the model that stands for evolution in the world is Neo-Darwinism. The theory maintains that millions of living beings present on the earth formed as a result of a process whereby numerous complex organs of these organisms such as the ears, eyes, lungs, and wings, underwent "mutations," that is, genetic disorders. Yet, there is an outright scientific fact that totally undermines this theory: Mutations do not cause living beings to develop; on the contrary, they always cause harm to them.



Since the beginning of the century, evolutionists have been trying to produce mutations in fruit flies, and give this as an example for useful mutation. However, the only result obtained at the end of these efforts that lasted for decades were disfigured, diseased, and defective flies.

The reason for this is very simple: the DNA has a very complex structure and random effects can only cause harm to it. American geneticist B.G. Ranganathan explains this as follows:

> First, genuine mutations are very rare in nature. Secondly, most mutations are harmful since they are random, rather than orderly changes in the structure of genes; any random change in a highly ordered system will be for the worse, not for the better. For example, if an earthquake were to shake a highly ordered structure such as a building, there would be a random change in the framework of the building which, in all probability, would not be an improvement.[62]

Not surprisingly, no mutation example, which is useful, that is, which is observed to develop the genetic code, has been observed so far. All mutations have proved to be harmful. It was understood that mutation, which is presented as an "evolutionary mechanism," is actually a genetic occurrence that harms living beings, and leaves them disabled. (The most common effect of mutation on human beings is cancer). No doubt, a destructive mechanism cannot be an "evolutionary mechanism." Natural selection, on the other hand, "can do nothing by itself" as Darwin also accepted. This fact shows us that there is no "evolutionary mechanism" in nature. Since no evolutionary mechanism exists, neither could any imaginary process called evolution have taken place.

The Fossil Record: No Sign of Intermediate Forms

The clearest evidence that the scenario suggested by the theory of evolution did not take place is the fossil record.

According to the theory of evolution, every living species has sprung from a predecessor. A previously existing species turned into something else in time and all species have come into being in this way. According to the theory, this transformation proceeds gradually over millions of years.

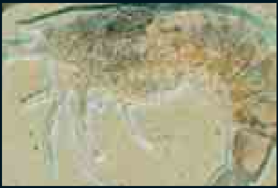
Had this been the case, then numerous intermediary species should have existed and lived within this long transformation period.

For instance, some half-fish/half-reptiles should have lived in the past which had acquired some reptilian traits in addition to the fish traits

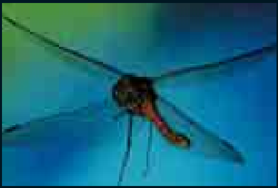
LIVING FOSSILS



SHRIMP



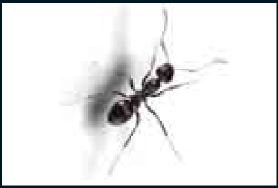
195 MILLION-YEAR-OLD SHRIMP FOSSIL



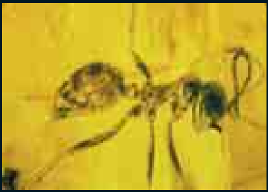
DRAGON FLY



150 MILLION-YEAR-OLD DRAGON FLY FOSSIL



ANT



100 MILLION-YEAR-OLD ANT FOSSIL



SHARK



400 MILLION-YEAR-OLD SHARK FOSSIL

they already had. Or there should have existed some reptile-birds, which acquired some bird traits in addition to the reptilian traits they already had. Since these would be in a transitional phase, they should be disabled, defective, crippled living beings. Evolutionists refer to these imaginary creatures, which they believe to have lived in the past, as "transitional forms."

If such animals had really existed, there should be millions and even billions of them in number and variety. More importantly, the remains of these strange creatures should be present in the fossil record. In *The Origin of Species*, Darwin explained:

> If my theory be true, numberless intermediate varieties, linking most closely all of the species of the same group together must assuredly have existed... Consequently, evidence of their former existence could be found only amongst fossil remains.[63]

Darwin's Hopes Shattered

However, although evolutionists have been making strenuous efforts to find fossils since the middle of the 19th century all over the world, no transitional forms have yet been uncovered. All the fossils unearthed in excavations showed that, contrary to the expectations of evolutionists, life appeared on earth all of a sudden and fully-formed.

A famous British paleontologist, Derek V. Ager, admits this fact, even though he is an evolutionist:

> The point emerges that if we examine the fossil record in detail, whether at the level of orders or of species, we find - over and over again - not gradual evolution, but the sudden explosion of one group at the expense of another.[64]

This means that in the fossil record, all living species suddenly emerge as fully formed, without any intermediate forms in between. This is just the opposite of Darwin's assumptions. Also, it is very strong evidence that living beings are created. The only explanation of a living species emerging suddenly and complete in every detail without any evo-

lutionary ancestor can be that this species was created. This fact is admitted also by the widely known evolutionist biologist Douglas Futuyma:

> Creation and evolution, between them, exhaust the possible explanations for the origin of living things. Organisms either appeared on the earth fully developed or they did not. If they did not, they must have developed from pre-existing species by some process of modification. If they did appear in a fully developed state, they must indeed have been created by some omnipotent intelligence.[65]

Fossils show that living beings emerged fully developed and in a perfect state on the earth. That means that "the origin of species" is, contrary to Darwin's supposition, not evolution but creation.

The Tale of Human Evolution

The subject most often brought up by the advocates of the theory of evolution is the subject of the origin of man. The Darwinist claim holds that the modern men of today evolved from some kind of ape-like creatures. During this alleged evolutionary process, which is supposed to have started 4-5 million years ago, it is claimed that there existed some "transitional forms" between modern man and his ancestors. According to this completely imaginary scenario, four basic "categories" are listed:

1. *Australopithecus*
2. *Homo habilis*
3. *Homo erectus*
4. *Homo sapiens*

Evolutionists call the so-called first ape-like ancestors of men *"Australopithecus"* which means "South African ape." These living beings are actually nothing but an old ape species that has become extinct. Extensive research done on various Australopithecus specimens by two world famous anatomists from England and the USA, namely, Lord Solly Zuckerman and Prof. Charles Oxnard, has shown that these belonged to an ordinary ape species that became extinct and bore no resemblance to humans.[66]

Evolutionists classify the next stage of human evolution as "homo," that is "man." According to the evolutionist claim, the living beings in the Homo series are more developed than Australopithecus. Evolutionists devise a fanciful evolution scheme by arranging different fossils of these creatures in a particular order. This scheme is imaginary because it has never been proved that there is an evolutionary relation between these different classes. Ernst Mayr, one of the most important proponents of the theory of evolution in the twentieth century, contends in his book *One Long Argument that "particularly historical [puzzles] such as the origin of life or of Homo sapiens, are extremely difficult and may even resist a final, satisfying explanation."*[67]

By outlining the link chain as "*Australopithecus > Homo habilis > Homo erectus > Homo sapiens*," evolutionists imply that each of these species is one another's ancestor. However, recent findings of paleoanthropologists have revealed that Australopithecus, Homo habilis and Homo erectus lived at different parts of the world at the same time.[68]

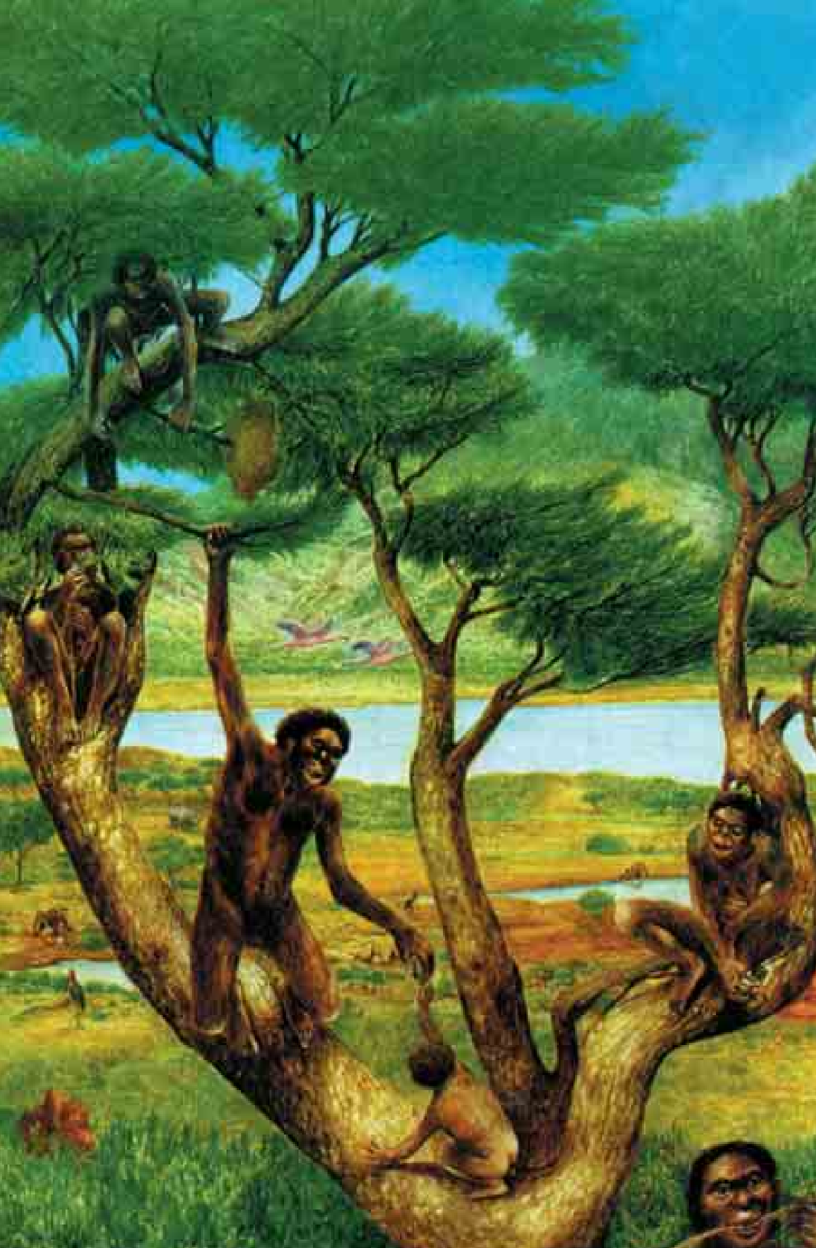
Moreover, a certain segment of humans classified as Homo erectus have lived up until very modern times. *Homo sapiens neandarthalensis and Homo sapiens sapiens* (modern man) co-existed in the same region.[69]

This situation apparently indicates the invalidity of the claim that they are ancestors of one another. A paleontologist from Harvard University, Stephen Jay Gould, explains this deadlock of the theory of evolution although he is an evolutionist himself:

> What has become of our ladder if there are three coexisting lineages of hominids (A. africanus, the robust australopithecines, and H. habilis), none clearly derived from another? Moreover, none of the three display any evolutionary trends during their tenure on earth.[70]

Put briefly, the scenario of human evolution, which is sought to be upheld with the help of various drawings of some "half ape, half human" creatures appearing in the media and course books, that is, frankly, by means of propaganda, is nothing but a tale with no scientific ground.

Lord Solly Zuckerman, one of the most famous and respected scientists in the U.K., who carried out research on this subject for years, and



particularly studied Australopithecus fossils for 15 years, finally concluded, despite being an evolutionist himself, that there is, in fact, no such family tree branching out from ape-like creatures to man.

Zuckerman also made an interesting "spectrum of science." He formed a spectrum of sciences ranging from those he considered scientific to those he considered unscientific. According to Zuckerman's spectrum, the most "scientific"—that is, depending on concrete data—fields of science are chemistry and physics. After them come the biological sciences and then the social sciences. At the far end of the spectrum, which is the part considered to be most "unscientific," are "extra-sensory perception"—concepts such as telepathy and sixth sense—and finally "human evolution." Zuckerman explains his reasoning:

> We then move right off the register of objective truth into those fields of presumed biological science, like extrasensory perception or the interpretation of man's fossil history, where to the faithful [evolutionist] anything is possible - and where the ardent believer [in evolution] is sometimes able to believe several contradictory things at the same time.[71]

The tale of human evolution boils down to nothing but the prejudiced interpretations of some fossils unearthed by certain people, who blindly adhere to their theory.

Technology In The Eye and The Ear

Another subject that remains unanswered by evolutionary theory is the excellent quality of perception in the eye and the ear.

Before passing on to the subject of the eye, let us briefly answer the question of "how we see". Light rays coming from an object fall oppositely on the retina of the eye. Here, these light rays are transmitted into electric signals by cells and they reach a tiny spot at the back of the brain called the centre of vision. These electric signals are perceived in this centre of the brain as an image after a series of processes. With this technical background, let us do some thinking.

The brain is insulated from light. That means that the inside of the brain

is solid dark, and light does not reach the location where the brain is situated. The place called the centre of vision is a solid dark place where no light ever reaches; it may even be the darkest place you have ever known. However, you observe a luminous, bright world in this pitch darkness.

The image formed in the eye is so sharp and distinct that even the technology of the 20th century has not been able to attain it. For instance, look at the book you read, your hands with which you hold it, then lift your head and look around you. Have you ever seen such a sharp and distinct image as this one at any other place? Even the most developed television screen produced by the greatest television producer in the world cannot provide such a sharp image for you. This is a three-dimensional, colored, and extremely sharp image. For more than 100 years, thousands of engineers have been trying to achieve this sharpness. Factories, huge premises were established, much research has been done, plans and designs have been made for this purpose. Again, look at a TV screen and the book you hold in your hands. You will see that there is a big difference in sharpness and distinction. Moreover, the TV screen shows you a two-dimensional image, whereas with your eyes, you watch a three-dimensional perspective having depth.



Despite their dozen of years of efforts, people have not been able to provide vision which has the same sharpness and high quality as the vision of an eye.



For many years, tens of thousands of engineers have tried to make a three-dimensional TV, and reach the vision quality of the eye. Yes, they have made a three-dimensional television system but it is not possible to watch it without putting on glasses; moreover, it is only an artificial three-dimension. The background is more blurred, the foreground appears like a paper setting. Never has it been possible to produce a sharp and distinct vision like that of the eye. In both the camera and the television, there is a loss of image quality.

Evolutionists claim that the mechanism producing this sharp and distinct image has been formed by chance. Now, if somebody told you that the television in your room was formed as a result of chance, that all its atoms just happened to come together and make up this device that produces an image, what would you think? How can atoms do what thousands of people cannot?

If a device producing a more primitive image than the eye could not have been formed by chance, then it is very evident that the eye and the image seen by the eye could not have been formed by chance. The same situation applies to the ear. The outer ear picks up the available sounds by the auricle and directs them to the middle ear; the middle ear transmits the sound vibrations by intensifying them; the inner ear sends these vibrations to the brain by translating them into electric signals. Just as with the eye, the act of hearing finalises in the centre of hearing in the brain.

The situation in the eye is also true for the ear. That is, the brain is insulated from sound just like it is from light: it does not let any sound in. Therefore, no matter how noisy is the outside, the inside of the brain is completely silent. Nevertheless, the sharpest sounds are perceived in the brain. In your brain, which is insulated from sound, you listen to the symphonies of an orchestra, and hear all the noises in a crowded place. However, if the sound level in your brain was measured by a precise device at that moment, it would be seen that a complete silence is prevailing there.

As is the case with imagery, decades of effort have been spent in trying to generate and reproduce sound that is faithful to the original. The results of these efforts are sound recorders, high-fidelity systems, and sys-

tems for sensing sound. Despite all this technology and the thousands of engineers and experts who have been working on this endeavour, no sound has yet been obtained that has the same sharpness and clarity as the sound perceived by the ear. Think of the highest-quality HI-FI systems produced by the biggest company in the music industry. Even in these devices, when sound is recorded some of it is lost; or when you turn on a HI-FI you always hear a hissing sound before the music starts. However, the sounds that are the products of the technology of the human body are extremely sharp and clear. A human ear never perceives a sound accompanied by a hissing sound or with atmospherics as does HI-FI; it perceives sound exactly as it is, sharp and clear. This is the way it has been since the creation of man.

So far, no visual or recording apparatus produced by man has been as sensitive and successful in perceiving sensory data as are the eye and the ear.

However, as far as seeing and hearing are concerned, a far greater fact lies beyond all this.

To Whom Does the Consciousness that Sees and Hears Within the Brain Belong?

Who is it that watches an alluring world in its brain, listens to symphonies and the twittering of birds, and smells the rose?

The stimulations coming from the eyes, ears, and nose of a human being travel to the brain as electro-chemical nervous impulses. In biology, physiology, and biochemistry books, you can find many details about how this image forms in the brain. However, you will never come across the most important fact about this subject: Who is it that perceives these electro-chemical nervous impulses as images, sounds, odours and sensory events in the brain? There is a consciousness in the brain that perceives all this without feeling any need for eye, ear, and nose. To whom does this consciousness belong? There is no doubt that this consciousness does not belong to the nerves, the fat layer and neurons comprising the brain. This is

why Darwinist-materialists, who believe that everything is comprised of matter, cannot give any answer to these questions.

For this consciousness is the spirit God created. The spirit needs neither the eye to watch the images, nor the ear to hear the sounds. Furthermore, nor does it need the brain to think.

Everyone who reads this explicit and scientific fact should ponder on Almighty God, should fear Him and seek refuge in Him, He Who squeezes the entire universe in a pitch-dark place of a few cubic centimetres in a three-dimensional, colored, shadowy, and luminous form.

A Materialist Faith

The information we have presented so far shows us that the theory of evolution is a claim evidently at variance with scientific findings. The theory's claim on the origin of life is inconsistent with science, the evolutionary mechanisms it proposes have no evolutionary power, and fossils demonstrate that the intermediate forms required by the theory never existed. So, it certainly follows that the theory of evolution should be pushed aside as an unscientific idea. This is how many ideas such as the earth-centered universe model have been taken out of the agenda of science throughout history.

However, the theory of evolution is pressingly kept on the agenda of science. Some people even try to represent criticisms directed against the theory as an "attack on science." Why?

The reason is that the theory of evolution is an indispensable dogmatic belief for some circles. These circles are blindly devoted to materialist philosophy and adopt Darwinism because it is the only materialist explanation that can be put forward for the workings of nature.

Interestingly enough, they also confess this fact from time to time. A well known geneticist and an outspoken evolutionist, Richard C. Lewontin from Harvard University, confesses that he is "first and foremost a materialist and then a scientist":

It is not that the methods and institutions of science somehow compel us ac-

> cept a material explanation of the phenomenal world, but, on the contrary, that we are forced by our a priori adherence to material causes to create an apparatus of investigation and a set of concepts that produce material explanations, no matter how counter-intuitive, no matter how mystifying to the uninitiated. Moreover, that materialism is absolute, so we cannot allow a Divine Foot in the door.[72]

These are explicit statements that Darwinism is a dogma kept alive just for the sake of adherence to the materialist philosophy. This dogma maintains that there is no being save matter. Therefore, it argues that inanimate, unconscious matter created life. It insists that millions of different living species; for instance, birds, fish, giraffes, tigers, insects, trees, flowers, whales and human beings originated as a result of the interactions between matter such as the pouring rain, the lightning flash, etc., out of inanimate matter. This is a precept contrary both to reason and science. Yet Darwinists continue to defend it just so as "not to allow a Divine Foot in the door."

Anyone who does not look at the origin of living beings with a materialist prejudice will see this evident truth: All living beings are works of a Creator, Who is All-Powerful, All-Wise and All-Knowing. This Creator is God, Who created the whole universe from non-existence, designed it in the most perfect form, and fashioned all living beings.

The Theory of Evolution is the Most Potent Spell in the World

It needs to be made clear that anyone free of prejudice and the influence of any particular ideology, who uses only his reason and logic, will clearly understand that belief in the theory of evolution, which brings to mind the superstitions of societies with no knowledge of science or civilization, is quite impossible.

As has been explained above, those who believe in the theory of evolution think that a few atoms and molecules thrown into a huge vat could produce thinking, reasoning professors, university students, scientists such as Einstein and Galileo, artists such as Humphrey Bogart, Frank

Sinatra and Pavarotti, as well as antelopes, lemon trees and carnations. Moreover, the scientists and professors who believe in this nonsense are educated people. That is why it is quite justifiable to speak of the theory of evolution as "the most potent spell in history." Never before has any other belief or idea so taken away peoples' powers of reason, refused to allow them to think intelligently and logically and hidden the truth from them as if they had been blindfolded. This is an even worse and unbelievable blindness than the Egyptians worshipping the Sun God Ra, totem worship in some parts of Africa, the people of Saba worshipping the Sun, the tribe of the Prophet Ibrahim worshipping idols they had made with their own hands or the people of the Prophet Musa worshipping the Golden Calf.

In fact, this situation is a lack of reason God pointed to in the Qur'an. He reveals in many verses that some peoples' minds will be closed and that they will be powerless to see the truth. Some of these verses are as follows:

> **As for those who disbelieve, it makes no difference to them whether you warn them or do not warn them, they will not believe. God has sealed up their hearts and hearing and over their eyes is a blindfold. They will have a terrible punishment. (Qur'an, 2: 6-7)**

> **…They have hearts they do not understand with. They have eyes they do not see with. They have ears they do not hear with. Such people are like cattle. No, they are even further astray! They are the unaware. (Qur'an, 7: 179)**

> **Even if We opened up to them a door into heaven, and they spent the day ascending through it, they would only say, "Our eyesight is befuddled! Or rather we have been put under a spell!" (Qur'an, 15: 14-15)**

Words cannot express just how astonishing it is that this spell should hold such a wide community in thrall, keep people from the truth, and not be broken for 150 years. It is understandable that one or a few people might believe in impossible scenarios and claims full of stupidity and illogicality. However, "magic" is the only possible explanation for people from all over the world believing that unconscious and lifeless atoms sud-

denly decided to come together and form a universe that functions with a flawless system of organization, discipline, reason and consciousness, the planet Earth with all its features so perfectly suited to life, and living things full of countless complex systems.

In fact, God reveals in the Qur'an in the incident of the Prophet Musa and Pharaoh that some people who support atheistic philosophies actually influence others by magic. When Pharaoh was told about the true religion, he told the Prophet Musa to meet with his own magicians. When the Prophet Musa did so, he told them to demonstrate their abilities first. The verses continue:

He said, "You throw." And when they threw, they cast a spell on the people's eyes and caused them to feel great fear of them. They produced an extremely powerful magic. (Qur'an, 7: 116)

As we have seen, Pharaoh's magicians were able to deceive everyone, apart from the Prophet Musa and those who believed in him. However, the evidence put forward by the Prophet Musa broke that spell, or "swallowed up what they had forged" as the verse puts it.

We revealed to Musa, "Throw down your staff." And it immediately swallowed up what they had forged. So the Truth took place and what they did was shown to be false. (Qur'an, 7: 117-119)

As we can see from that verse, when it was realized that what these people who had first cast a spell over others had done was just an illusion, they lost all credibility. In the present day too, unless those who under the influence of a similar spell believe in these ridiculous claims under their scientific disguise and spend their lives defending them abandon them, they too will be humiliated when the full truth emerges and the spell is broken. In fact, Malcolm Muggeridge, an atheist philosopher and supporter of evolution admitted he was worried by just that prospect:

I myself am convinced that the theory of evolution, especially the extent to which it's been applied, will be one of the great jokes in the history books in the future. Posterity will marvel that so very flimsy and dubious an hypothesis could be accepted with the incredible credulity that it has.[73]

That future is not far off: On the contrary, people will soon see that "chance" is not a god, and will look back on the theory of evolution as the worst deceit and the most terrible spell in the world. That spell is already rapidly beginning to be lifted from the shoulders of people all over the world. Many people who see the true face of the theory of evolution are wondering with amazement how it was that they were ever taken in by it.

They said "Glory be to You!
We have no knowledge except what
You have taught us.
You are the All-Knowing,
the All-Wise."
(Qur'an, 2: 32)

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